arc

LIGHTING IN ARCHITECTURE

#145

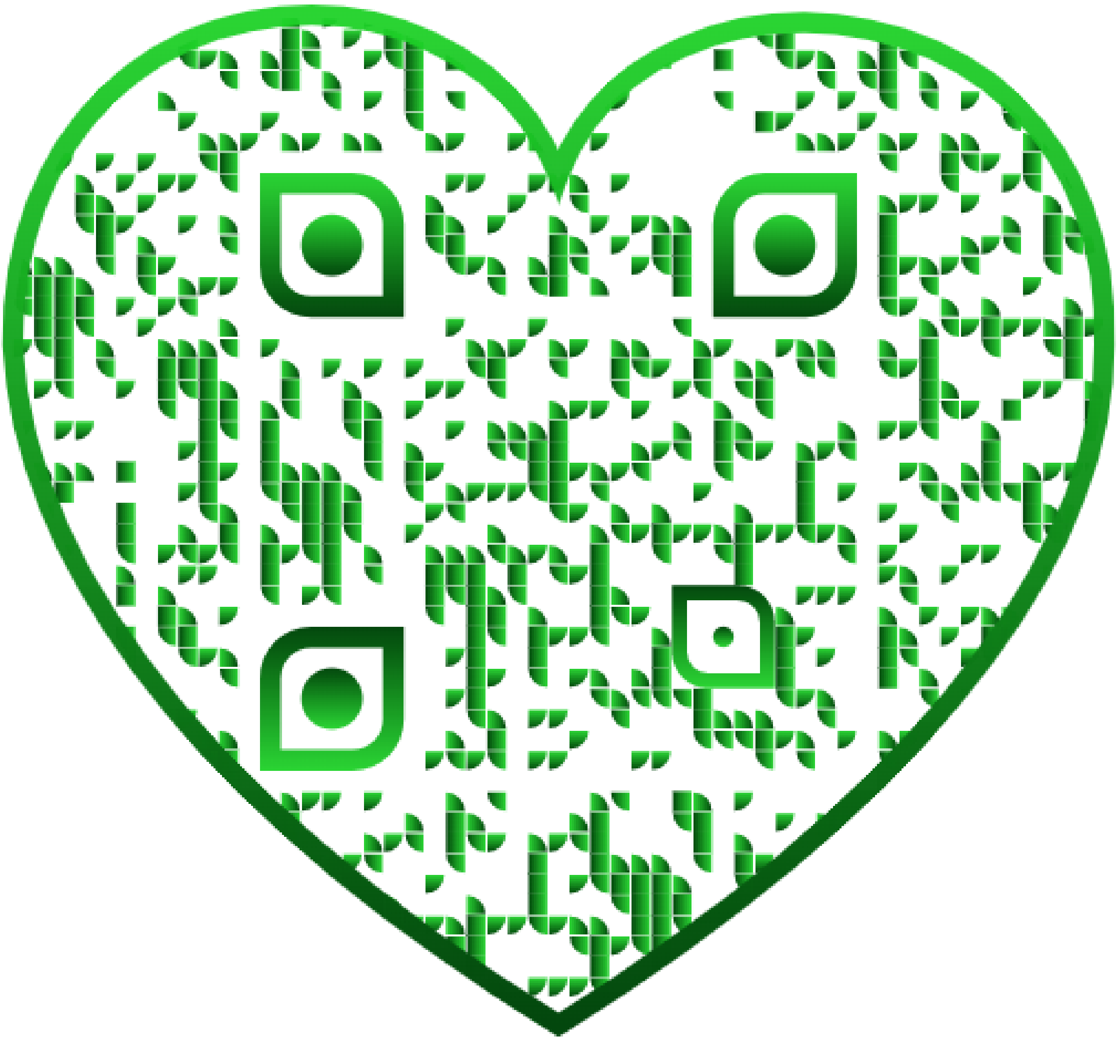
Cover Story:

The Reserve, Singapore

Workspace Lighting

Koert Vermeulen

LEDucation Review



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DALI - Cathedral.pd2 - Designer [Primary Window]
10:26
DMX Fixtures
DMX Fixtures - Focus
DALI Loop 1 2
DALI Loop 3
DALI Loop 4 5
DALI Loop 6 7 11
DALI Loop 12
DALI LOOP 12
Scene Library
Interfaces
Scenes
All Fixtures
All DALI Ballast
Interface 1
Interface 2
pharos
LPC
DMX 1
DMX 2
RS232/485
Reset
ETHERNET 10/100TX PD
9 - 48V DC
INPUTS
MEMORY CARD
DALI 1
DALI 2
DALI 3
DALI 4
NC
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Active
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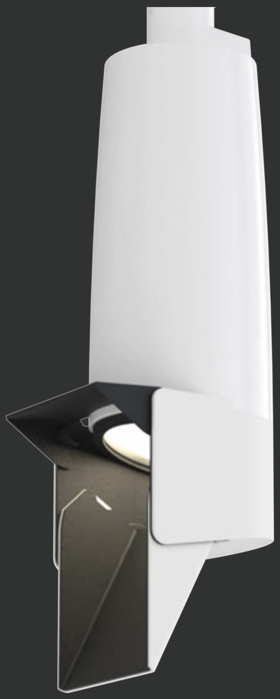

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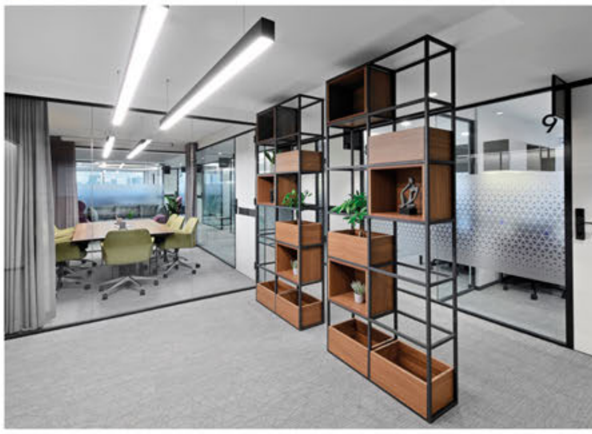

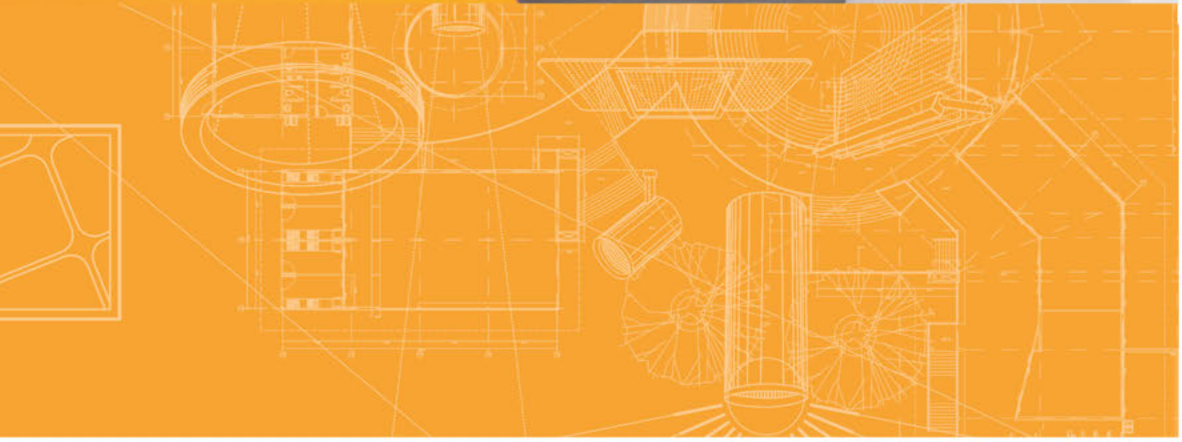

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ACME
DOWNLIGHT PINHOLE

ACME
SPOTLIGHT IN/OUT

SYSTEM 57

57mm

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ACME
DOWNLIGHT CURVE

ACME
DOWNLIGHT SEMI

ACME
DOWNLIGHT PINHOLE

ACME
SPOTLIGHT IN/OUT

ACME
DOWNLIGHT ALABASTER

SYSTEM 68

68mm

ACME
DOWNLIGHT STRAIGHT

ACME
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ACME
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ACME
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Lighting Design: Relume Consulting – Architect: BKK Architects

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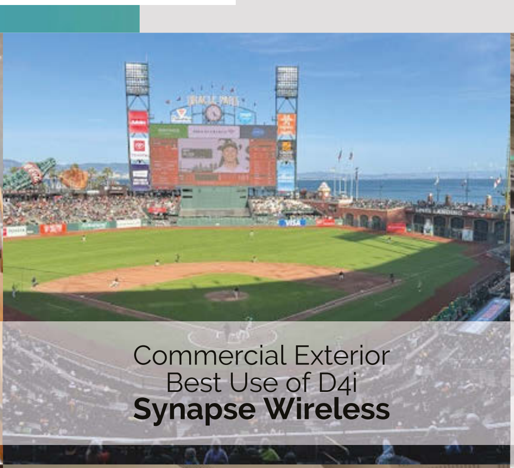
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[d]arc sessions

Welcome

Exciting times here at arc HQ! At the time of writing, while putting together the last few bits and bobs for this issue, I'm finalising my schedule for Milan Design Week (I'll likely be walking the streets of the Brera district and/or drinking an Aperol Spritz by the time you read this!), and we have also been counting, verifying, and independently adjudicating the results from this year's [d]arc awards. All of this to say, I feel like I need about 10 hands to keep track of all the plates I'm spinning at the moment!

With voting for the [d]arc awards now officially closed, it means that we are mere weeks away from what will be an extravagant celebration, as this year marks the 10th anniversary of our annual awards programme. With that in mind, we are going all out for the occasion, with a new venue, a decadent dress code (get it? Decadent? Like decade? Because it's the 10th... ah never mind), and one or two extra surprises thrown in for good measure. Everyone that voted in the awards is eligible for a ticket to the awards party, so I look forward to seeing you all there on 24 April.

Someone who knows a thing or two about decadent celebrations is Koert Vermeulen, the Belgian lighting extraordinaire, who this year celebrates the 30th anniversary of his studio, ACTLD. It's always a pleasure to talk with Koert about his awe-inspiring work, and in this issue, I was lucky enough to sit down with him to hear more about his remarkable origin story, his creative process, and his vision for the future.

Elsewhere in this edition, you can find a breakdown of some of our top finds from this year's LEDucation event, held in New York this March. The show is quickly becoming one of our favourites to attend, not least to witness remarkable organisational feat to see just how many exhibitors and attendees can fit in such a small venue. If anything, it is a testament to the rapidly growing popularity of the event.

Speaking of rapidly growing popularity (how's that for a segue?!), by the time our next issue reaches you, we'll be fresh from the latest [d]arc sessions event, this time in beautiful Ibiza. We'll also have recaps from Milan, Clerkenwell, and news of all our awards winners. Needless to say, it's going to be a fun couple of months. Watch this space!

Enjoy the issue!

Matt Waring
Editor

arc
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Cover Story:
The Reserve, Singapore
Workspace Lighting
Koert Vermeulen
LEDucation Review

Front cover: The Reserve, Singapore
(Image: Finbarr Fallon)

#145

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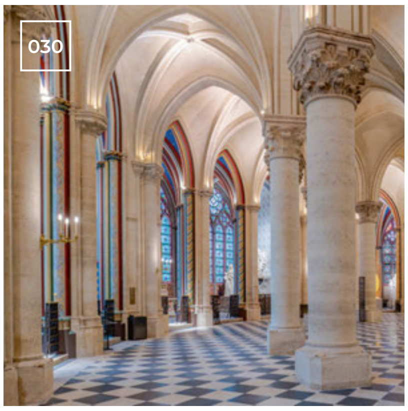
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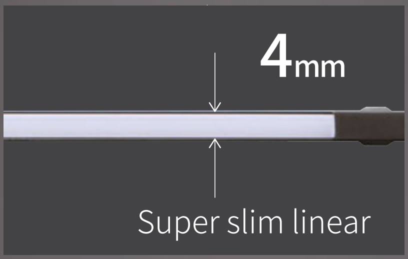
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24 April
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www.darcawards.com

MAY

Lightfair
4-8 May
Las Vegas, USA
www.lightfair.us.messefrankfurt.com

[d]arc sessions Europe
6-8 May
Ibiza, Spain
www.darcsessions.com

Clerkenwell Design Week
20-22 May
London, UK
www.clerkenwelldesignweek.com

JUNE

GILE
9-12 June
Guangzhou, China
www.guangzhou-international-lighting-exhibition.hk.messefrankfurt.com

IALD Enlighten Europe
26-27 June
Valencia, Spain
www.iald.org

AUGUST

LEDforum
20-22 August
Sao Paulo, Brazil
www.ledforum.com.br

IES25 The Lighting Conference
21-23 August
Anaheim, USA
www.ies.org

SEPTEMBER

Plasa
7-9 September
London, UK
www.plasashow.com

Architect@Work
16-17 September
London, UK
www.architect-at-work.co.uk

ArchLIGHT Summit
16-17 September
Dallas, USA
www.archlightsummit.com

Circular Lighting Live
25 September
London, UK
www.circularlightinglive.com

OCTOBER

IALD Enlighten Americas
9-11 October
Tucson, USA
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EDITORIAL

Managing Editor
Helen Ankers
h.ankers@mondiale.co.uk

Editor
Matt Waring
m.waring@mondiale.co.uk

Junior Journalist
Ellie Walton
e.walton@mondiale.co.uk

Contributing Editor
Sarah Cullen
s.cullen@mondiale.co.uk

COMMERCIAL

Managing Director
Paul James
p.james@mondiale.co.uk

Head of Business Development
Jason Pennington
j.pennington@mondiale.co.uk

International Account Manager
Andrew Bousfield
a.bousfield@mondiale.co.uk

International Account Manager
Ethan Holt
e.holt@mondiale.co.uk

Events & Marketing Manager
Moses Naeem
m.naeem@mondiale.co.uk

DESIGN

Design Manager
David Bell
d.bell@mondiale.co.uk

Design
Jez Reid
j.reid@mondiale.co.uk

Production
Mel Capper
m.capper@mondiale.co.uk

CORPORATE

Chairman
Damian Walsh
d.walsh@mondiale.co.uk

Finance Director
Amanda Giles
a.giles@mondiale.co.uk

Credit Control
Lynette Levi
l.levi@mondiale.co.uk

[d]arc media ltd
Strawberry Studios,
Watson Square, Stockport
SK1 3AZ, United Kingdom
T: +44 (0)161 464 4750
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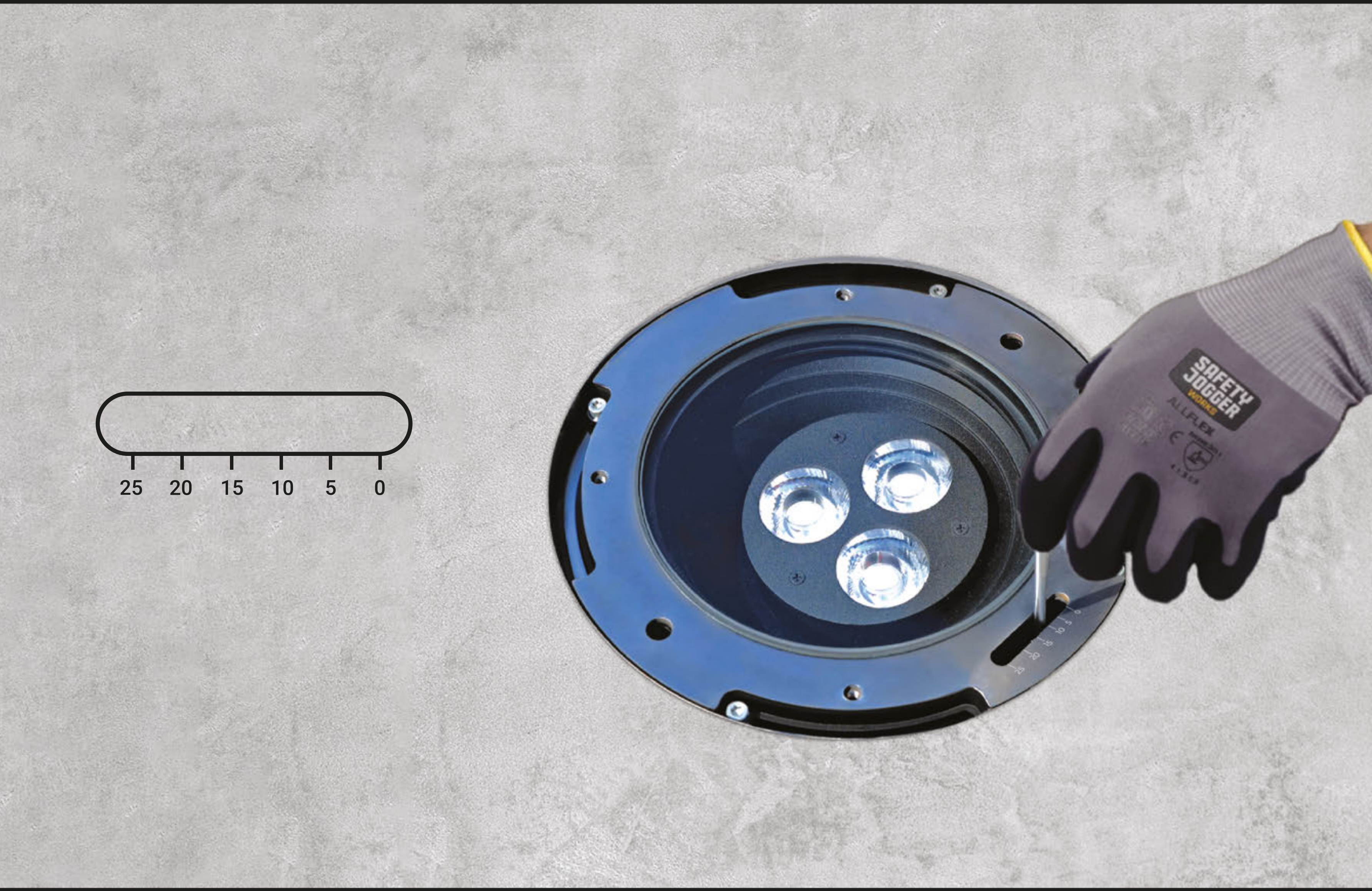

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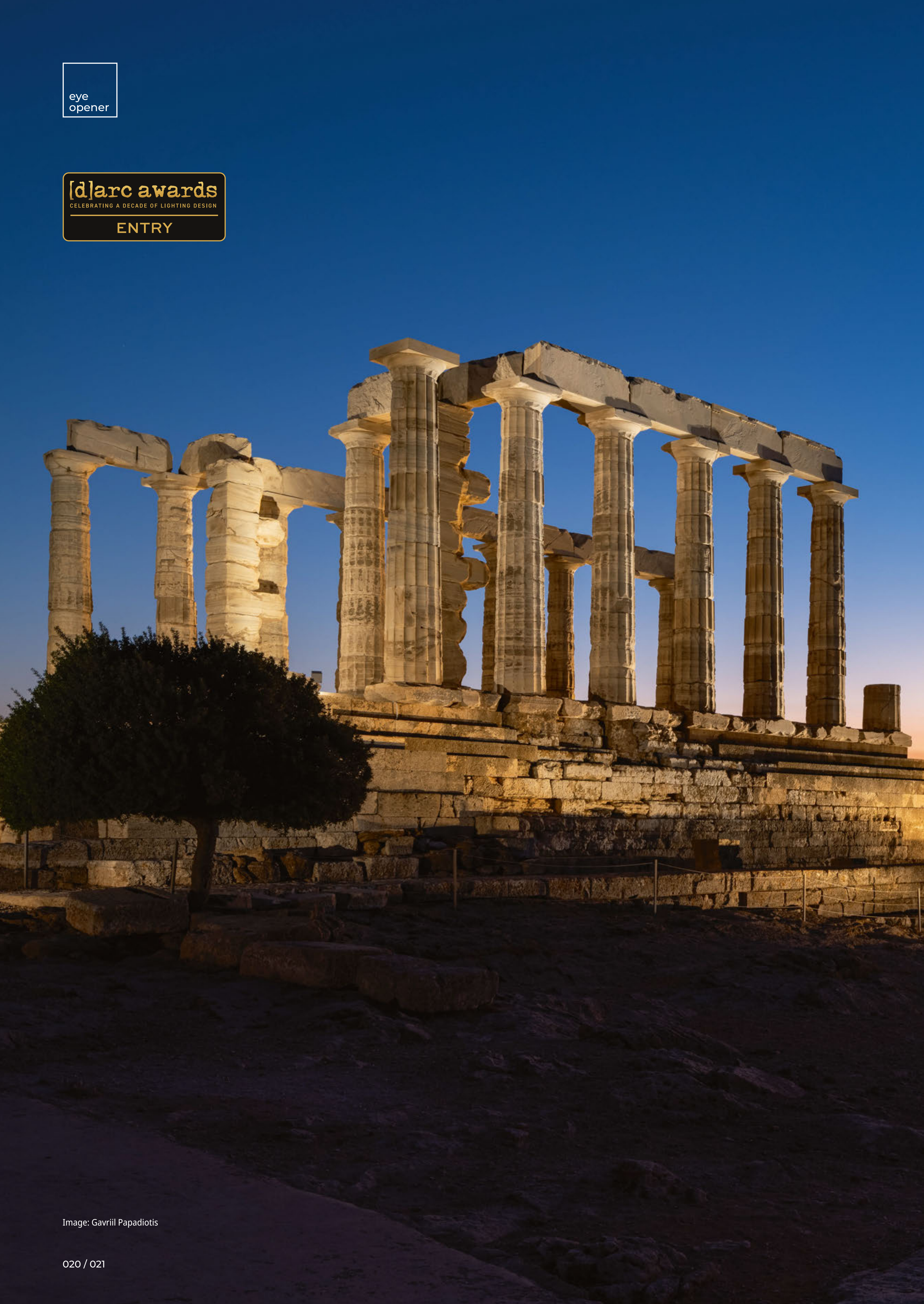


Image: Gavriil Papadiotis

Temple of Poseidon
Sounion, Greece

The new lighting of the Temple of Poseidon at Sounion breathes life into the monument, honouring its timeless presence and respecting its historical significance.

The Temple of Poseidon is located on the cliffs of Cape Sounion and it is mainly visible from the northwest direction as one approaches from the coastal road and from the surrounding sea. This characteristic determined the new lighting design, crafted by Eleftheria Deko and Associates, as it was crucial the light intensity was at a relatively “higher” level in order to be seen from such a distance.

Warmer tones of white light (2700K) are chosen to embrace the fortification wall, while cooler white light (3600K) illuminates the columns of the temple from the outside and warmer on the inside. The base of the temple is lit by neutral temperature (3000K). In this way, the Fortification Wall, the sanctuary and the base are distinguished even from a distance. An astronomical clock is used for the illumination and light goes on as the sun sets, while at sunrise it turns off. The lighting fixtures were chosen for their characteristics as well as their size and shape in order to be well integrated into the landscape so that day visitors are not distracted.

Compared to the preexisting electrical system, which lit only a few columns, not the walls or the base, the new lighting gives a more complete night view of the monument. The lighting system is energy-efficient, aligning with contemporary sustainability practices. Specifically, it includes 38 lights, totalling 1740W. Deko’s approach prioritises minimal environmental impact and is in accordance with the archaeological rules and restrictions for such monuments. Moreover, the luminaires are placed with care so as not to touch the monument, while cabling is hidden as much as possible so as not to disturb the daytime view of the archaeological site.

www.edeko.gr

Old Trafford Stadium District

Manchester, UK

Foster + Partners has unveiled the masterplan for the proposed development of the Old Trafford Stadium District, home to Manchester United Football Club. The focus is to design a world-class football destination and home for Manchester United fans, coupled with a wider masterplan comprising mixed-use developments, which would benefit the local community, attract new residents, increase job provision, and make it a vibrant destination for visitors both from Manchester, the UK, and all around the world.

Alongside the masterplan, Foster + Partners has worked with the club to produce some illustrative concepts for the new landmark stadium, which would sit at the heart of this ambitious masterplan, and act as a catalyst for regeneration.

Lord Norman Foster, Founder and Executive Chairman of Foster + Partners, said: "This has to be one of the most exciting projects in the world today, with incredible regional and national significance. It all starts with the fans' experience, bringing them closer than ever to the pitch and acoustically cultivating a huge roar. The stadium is contained by a vast umbrella, harvesting energy and rainwater, and sheltering a new public plaza that is twice the size of Trafalgar Square. The outward-looking stadium would be the beating heart of a new sustainable district, which is completely walkable, served by public transport, and endowed by nature. It is a mixed-use miniature city of the future – driving a new wave of growth and creating a global destination that Mancunians can be proud of."

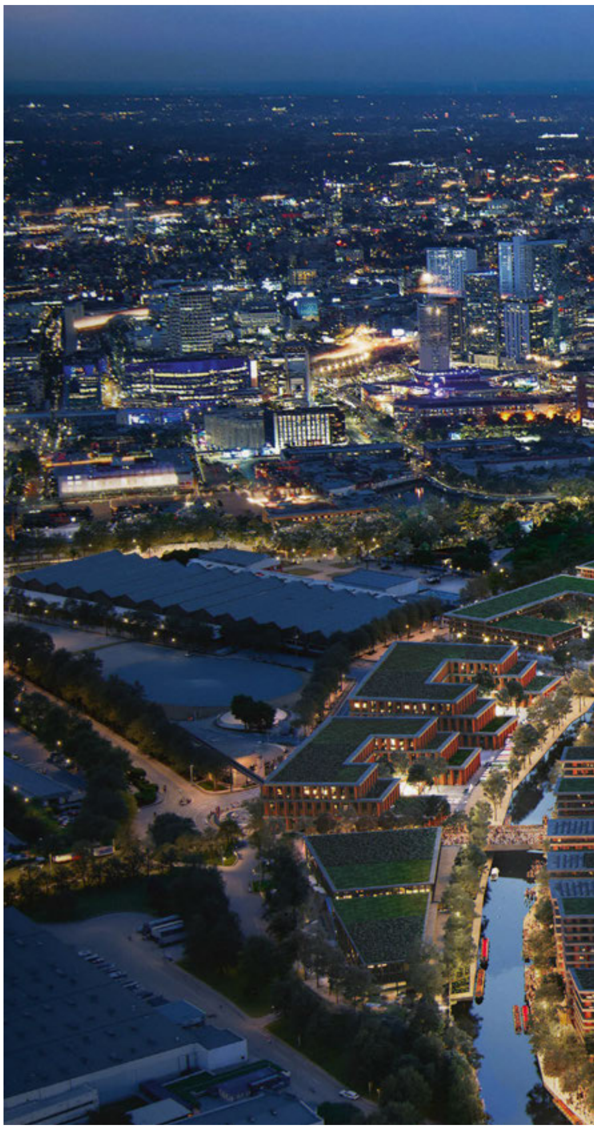
Informed by the city's history, the sports-led regeneration project would transform the one-million square metre brownfield site into a thriving mixed-use district, with a network of green civic spaces, streets, bridges, and waterfront areas.

Inverting the traditional model of football stadium design, the new stadium concept is open and outward facing, with wraparound balconies that overlook the wider development. Located at the centre of the district, it would be a globally recognisable landmark, encapsulating Manchester United's spirit and the city's heritage.

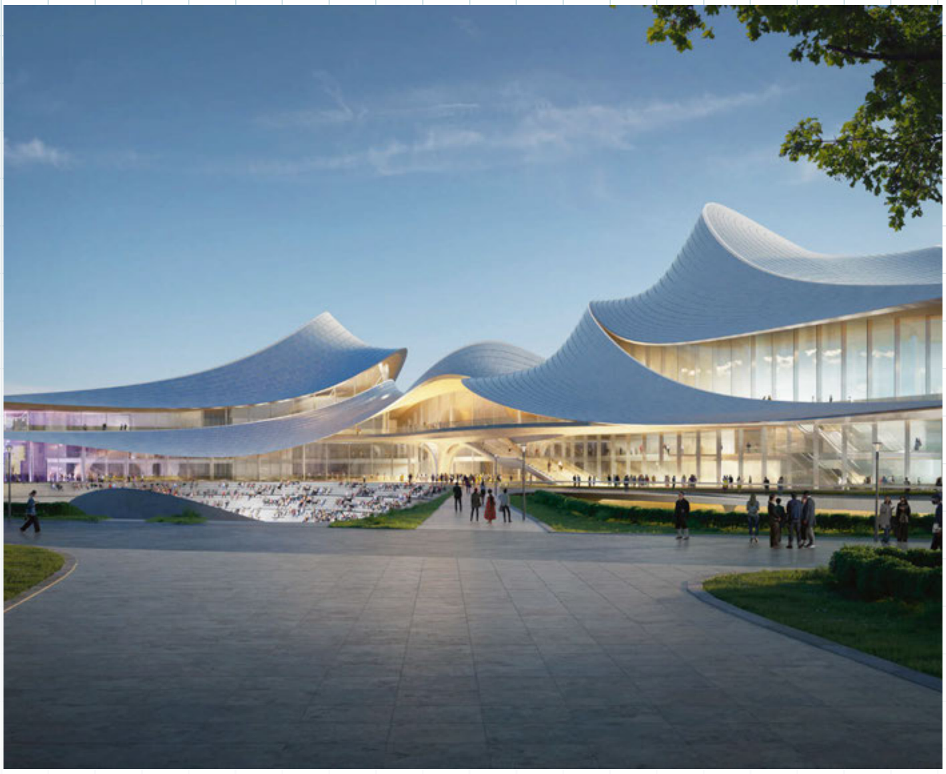
The stadium features three soaring masts, which take inspiration from the Red Devils' trident emblem, and reflect the verticality of Manchester's industrial skyline. The masts support a translucent canopy that envelopes the stadium, wrapping around the stands and shielding a generous public plaza from rainfall.

The covered plaza will feature a range of interactive experiences for Manchester United's fans and global visitors, and overlooks the city's Bridgewater Canal, which runs adjacent to the site. The practice's design creates a processional route from a new train station to the plaza, which would serve as a welcoming focal point for fan gatherings and community events.

www.fosterandpartners.com



Images: © Foster + Partners



Zhejiang Shaoxing Shangyu District Cao'e River Culture and Art Centre

Shaoxing, China

Zaha Hadid Architects has been selected to design the Zhejiang Shaoxing Shangyu District Cao'e River Culture and Art Centre, the cornerstone of the new cultural quarter within the Shangyu District of Shaoxing in China's Zhejiang province.

Designed to host local and international productions of opera, dance and drama together with large-scale symphonies and musical theatre, the Art and Culture Centre includes a 1,400-seat grand theatre, 500-seat Black-Box multifunctional hall, 2,900sqm arts and education centre, 3,000sqm conference centre, 7,500sqm heritage museum and a 10,000sqm digital art gallery.

On the banks of the historic Cao'e River, the Culture and Art Centre's sheltered courtyards are an extension of the centre's interiors. These outdoor gathering spaces flow into terraced landscapes that surround the centre and connect directly with the city, giving Shaoxing's residents and visitors a variety of natural parklands and gardens for relaxation and recreation along the river.

Integrating multiple levels of public spaces and technical infrastructure to host performances of dance and theatre within the centre's courtyards and foyers, the design honours the rich tradition and craftsmanship of glazed tiles upon pitched roofs within the region's vernacular architecture.

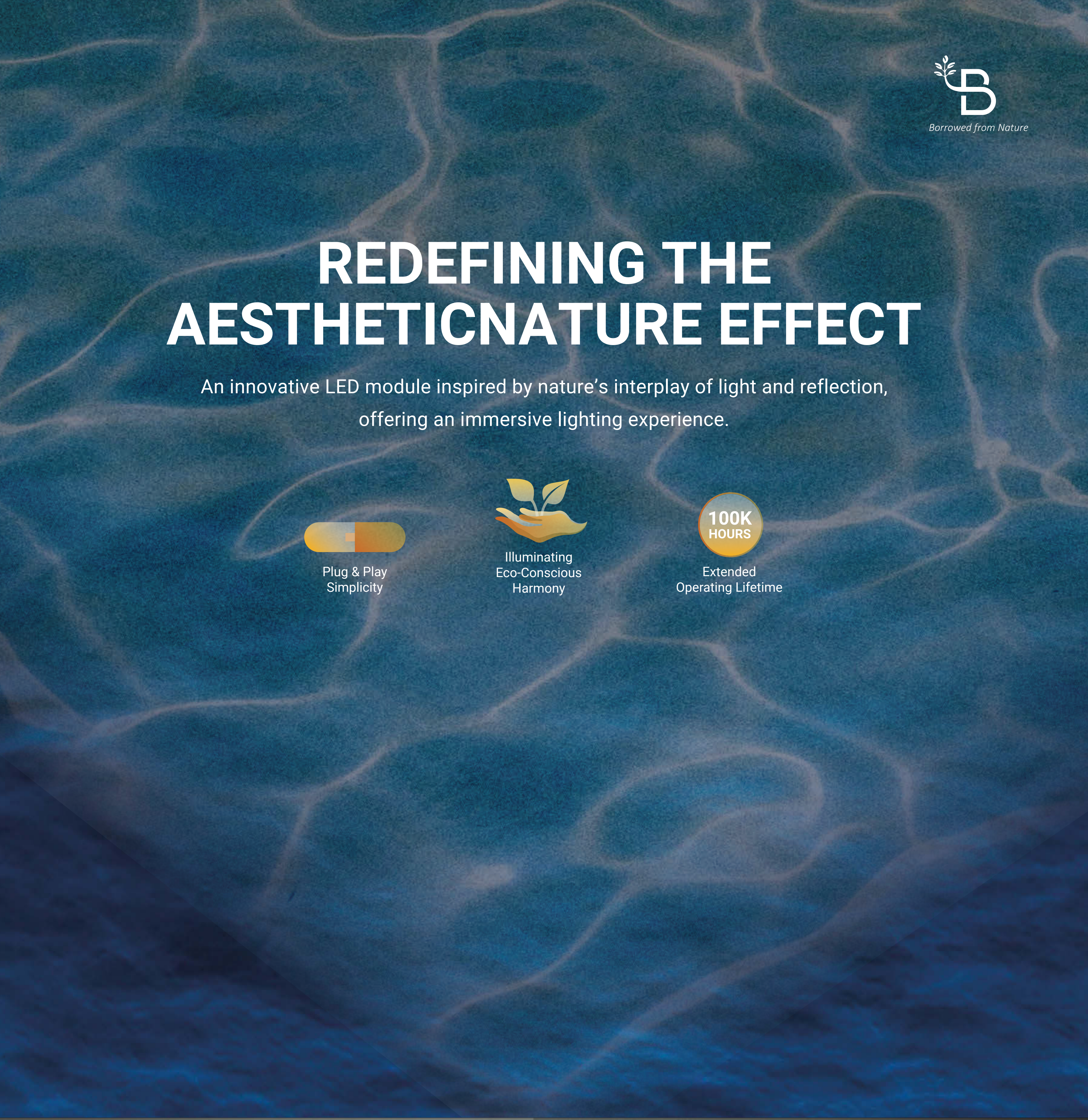
Creating an interconnected composition of roofs that flow above the timeless river landscapes, the Cultural and Art Centre establishes a new, yet highly recognisable, silhouette informed by the area's historical architecture.

The centre's façades are a contemporary articulation of the renowned jade-green Celadon ceramics that originated locally at the beginning of the Northern Song Dynasty approximately 1,200 years ago. In this way, traditional materials and innovative architecture are integrated coherently, defining a 21st Century cultural building with a direct connection to the region's ancient past.

Sustainability is at the heart of ZHA's creative thinking, architectural expression and design language. Responding to Shaoxing's subtropical monsoon climate, the design's large sloping roofs incorporate wide overhangs around the perimeter of each venue, providing effective shading for the glass façades that open onto covered outdoor courtyards, which extend into the landscape.

Solar analysis of the site throughout each season has defined the roofs' geometries to create self-shading zones that effectively reduce solar heat gain within the building and shade the outdoor courtyards in the summer months. The distinctive forms of the Cultural and Art Centre's roofs extend further and lower on the centre's southern façades to ensure optimum protection from the stronger solar radiation, while photovoltaic panels integrated within the roof will enable the centre to significantly reduce its energy demand from the municipal electricity grid.

www.zaha-hadid.com



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IN CONVERSATION
PATRICIA LOPEZ YANEZ

In partnership with the IALD and Dark Sky International, **Patricia Lopez Yanez** is helping to bring International Dark Sky Week to the UAE for the first time this April, hoping to bring together lighting designers, municipalities and scientific experts to discuss the impact of light pollution in the built environment. Speaking to arc, Lopez Yanez reveals the plans for the week.

What is International Dark Sky Week?
International Dark Sky Week (IDSW) is a global initiative led by Dark Sky International to raise awareness about light pollution and advocate for responsible outdoor lighting. It highlights the profound impact of excessive artificial lighting on the environment, biodiversity, and human wellbeing while promoting solutions that balance illumination needs with sustainability.

When did you get involved in the initiative? What is your role for the week?
My involvement in Dark Sky advocacy began in 2020 when I was leading the lighting strategy for one of the key giga-projects in Saudi Arabia. My role at that time required me to develop responsible lighting strategies that aligned with the ambitious architectural vision of the project, and the environmental goals of Dark Sky principles.

I worked with international lighting consultants, scientists, municipalities, and hotel operators to ensure that Dark Sky practices were not seen as limitations but as opportunities to create healthier, more sustainable environments. One of the most rewarding aspects of my work was collaborating with the community outreach team of the company. It was through this partnership that we introduced International Dark Sky Week (IDSW) to Saudi Arabia in 2021. This was my first direct involvement with IDSW as an initiative, and it quickly became a key part of my advocacy work.

Since relocating to Dubai in 2024, I have dedicated my expertise to integrating Dark Sky principles within the UAE's built environment. Unlike Saudi Arabia, where new developments allow for responsible lighting strategies to be embedded from the outset at masterplan level, Dubai presents a different challenge. Here, lighting is deeply embedded in the urban fabric already and is often viewed as a sign of progress.

For IDSW UAE 2025, I have taken on the role of Organiser, leveraging the network I have built over the years in the region with developers, governing bodies, manufacturers, and lighting designers to bring this initiative to life.

What events have you got planned for IDSW?
IDSW 2025 will feature a series of carefully curated events: these include a dialogue featuring international lighting designers, urban planners, and municipal representatives on how Dark Sky policies can be integrated into real estate and city planning; an expert panel and multidisciplinary debate, bringing together astronomers, biologists, academics, and environmental policymakers to explore the scientific and regulatory aspects of light pollution and its impact on human and ecological wellbeing; and a community-focused event in collaboration with the Dubai Astronomy Group, highlighting the role of the night sky in Emirati culture, with expert-led discussions on celestial navigation and light pollution.

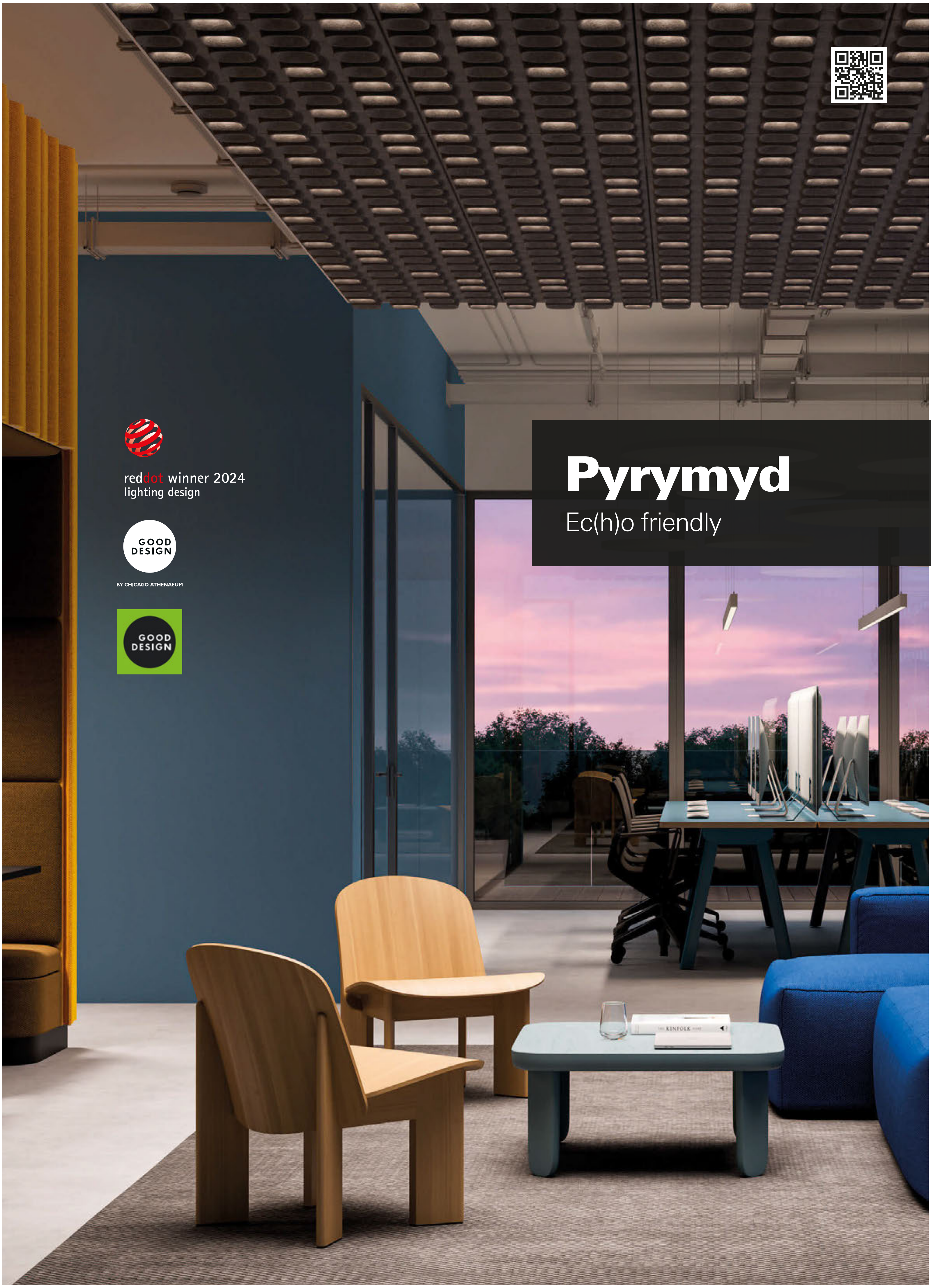
This event would not have been possible without the right team and a strong support network. Key members of my steering board include Ruskin Hartley, CEO of Dark Sky International, Maria Dautant, Local Coordinator of IALD Middle East; Sheeraz Ahmad from the Dubai Astronomy Group; and Emilio Khayat from Bega / Aubrilam Middle East.

What are your goals for the event?
Beyond raising awareness, my long-term ambition is to lay the groundwork for a sustainable Dark Sky movement in the UAE and the wider Middle East – one that is not only driven by passion but also supported by structured policies and sustainable funding models. I am actively working toward establishing the foundations for the UAE chapter for Dark Sky International, ensuring that these efforts evolve into a long-term framework for advocacy, policy influence, and responsible lighting practices.

Why is it important to have such an event?
There is already momentum for change in the UAE. Abu Dhabi's Dark Sky Policy, which I had the opportunity to review, has been implemented since early 2024, setting a precedent for responsible lighting in the region. Additionally, conservation agencies in Dubai, particularly those overseeing Ramsar sites, have expressed interest in Dark Sky principles as part of their efforts to protect migratory birds from the adverse effects of artificial light.

At its core, this movement is about education and messaging. People need to understand what light pollution truly implies and recognise that Dark Sky advocacy is not about eliminating light but about using it efficiently and responsibly. Fear of darkness often stems from misconceptions, and part of this effort is shifting perceptions so that people stop equating darkness with the absence of light.

www.idsw.darksky.org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Snapshot
Light & Beyond

Using light to shape perception and evoke emotion, **Light & Beyond** has built a rich portfolio of luxurious lighting design projects across India and overseas.

1 Taj Guras Kutir Resort & Spa
Kolkata, India

Nestled in the enchanting landscapes of Pangthang, Sikkim, India, Taj Guras Kutir Resort & Spa is a luxurious mountain retreat offering stunning views of the Eastern Himalayan Range. Surrounded by canopied forests, this resort boasts 69 spacious rooms and suites, each providing surreal vistas, crisp mountain air, and vibrant flora.

At Taj Guras Kutir, the focus on innovative lighting design sets a benchmark in sustainable, maintenance-free design. Here, nature dictates its own rhythm, with weather conditions that can shift every 10 minutes, creating an ever-changing canvas for creative solutions. Moreover, being located far from the main city poses logistical challenges, making regular maintenance and quick courier deliveries difficult. This necessitated a lighting design that is robust, environmentally considerate, and virtually maintenance-free.

Light & Beyond engineered outdoor fixtures to seamlessly blend into the natural landscape while ensuring they remain low-maintenance. Situated in the heart of a forest teeming with reptiles, rodents, birds, and insects, the project required the designers to think creatively about safety and ecological impact.

For management and architects, the interplay of light and shadow creates a captivating visual narrative. For the lighting designers, however, it was a commitment to merging technical excellence with ecological mindfulness – a design philosophy that prioritises safety, sustainability, and the seamless integration of technology with nature.

2 The Berger House
Kolkata, India

Designed by Pace Consultants and illuminated by Light & Beyond, the Berger House Headquarters stands as a testament to the fusion of innovation, design, and lighting mastery. As the headquarters of Berger Paints, a well-known paint company in India, the building reflects the brand's commitment to creativity and excellence. The striking façde transforms dynamically, creating a mesmerising play of colours that enhances its architectural form. Each hue tells a story, setting the mood and elevating the city's nighttime skyline. Whether glowing in vibrant green, regal purple, or deep blue, the lighting design breathes life into the structure, making it an ever-evolving visual spectacle.

To achieve this seamless transformation, Light & Beyond used lighting fixtures by Signify, ensuring precision, efficiency, and durability. The carefully curated lighting scheme not only enhances the building's aesthetics, but also aligns with energy-efficient and sustainable design principles. Beyond aesthetics, the lighting concept embodies a deeper purpose: enhancing the building's presence while maintaining harmony with its surroundings. The interplay of shadows and light adds depth, giving the structure a distinctive identity that changes with every transition of light.

3 Taj Taal Kutir Convention Centre
Kolkata, India

Situated in Eco Park, Kolkata, India, the Taj Taal Kutir Convention Centre harmoniously blends colonial heritage with modern design, creating an enchanting atmosphere for events. Upon arrival, the majestic red-brick façade pays homage to colonial heritage and local artistry. The true magic, however, lies in the lighting design. Here, light and shadow are artfully choreographed to create a festive ambiance in harmony with the serene surroundings, minimising light pollution.

A highlight is Narayan Sinha's sculpture, casting a ship engine's shadow onto a red brick wall. Integrated into the space, the sculpture shifts into a mother playing with her child, showcasing the centre's seamless blend of art and architecture.

Indoors or amidst nature, spaces come alive under Taj Taal Kutir's transformative lighting. Architectural features and curated artworks, honouring India's rich heritage, are illuminated to create grand narratives.

The city's largest pillar-less banquet hall, with a 7.2-metre ceiling, boasts innovative lighting. To complement the chandelier, 10 10mm 4W fixtures with Bartenbach lenses were strategically placed, camouflaging with the ceiling while enhancing functionality.

In the pre-function area, a real boat suspended from the ceiling creates a captivating visual. Its floor reflection adds another layer of enchantment.

Taj Taal Kutir Convention Centre is a paragon of architectural and lighting excellence. Every detail, from lighting fixtures to design elements, is meticulously crafted to elevate events, making it a premier destination for unforgettable experiences.

4 The Zown
Gujarat, India

The Zown by Siddhraj Group is one of the largest and most unique weekend home developments in Gujarat, spanning 140 acres with 395 villas. Designed by Vipul Patel Architects (VPA), the project redefines luxury living by seamlessly blending architecture with nature.

Surrounded by a river and enriched with numerous water bodies within the premises, The Zown creates a serene, immersive environment that prioritises sustainability, minimalism, and environmental harmony.

The lighting design embraces a philosophy of subtlety, efficiency, and ecological sensitivity. A key approach is camouflaging light sources within the architecture and landscape, ensuring minimal visibility while creating a warm, inviting ambiance. The project is also designed to be light pollution-free, protecting the natural ecosystem and local wildlife.

Extensive research on the native bird and reptile species has guided the lighting strategy to prevent any disruption to their habitat.

Durability and ease of maintenance are central to the design, with maintenance-free fixtures carefully selected for long-term functionality. Sustainability is a core principle, with 95% recyclable fixtures and a circular economy approach that promotes material reuse and minimal waste.

As one of Gujarat's most distinctive projects, The Zown combines energy-efficient technologies, low-glare lighting, and a warm colour palette to enhance its organic charm. With a strong background in master planning for private islands and luxury retreats worldwide, Light & Beyond has curated a lighting experience that is both luxurious and environmentally responsible – setting new standards for sustainable architectural lighting.

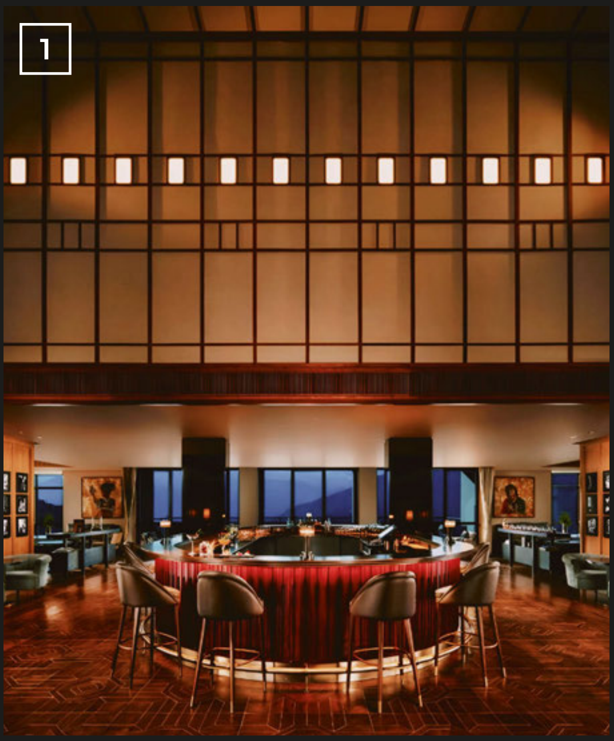
Light & Beyond is a global lighting design consultancy dedicated to redefining the way light transforms spaces. More than just illumination, it sees light as a powerful force that shapes perception, evokes emotion, and enhances architectural beauty.

Founded in 2009, the studio specialises in luxurious villas, Hollywood celebrity residences, private islands, ultra-luxury yachts, and high-end hospitality projects. As Lighting Architects, Light & Beyond brings more than 70 years of combined expertise and a global presence in Mumbai, Ahmedabad, Vienna, Kolkata, and Kiev, offering a multicultural perspective and a bespoke approach to every project.

The practice is spearheaded by Tejas Doshi, India's first, Asia's second, and the world's 17th Certified Lighting Designer (CLD). A Professional Member of the International Association of Lighting Designers (IALD) and a Global Honorary Member of the Dellas Leaders Club (DLC), Doshi was also named among the 40 Under 40 Hottest Lighting Designers in the World (2018).

Light & Beyond's internationally acclaimed team blends innovation, technical expertise, and artistic vision to set new benchmarks in residential, hospitality, and luxury architectural lighting.

www.lightandbeyond.com



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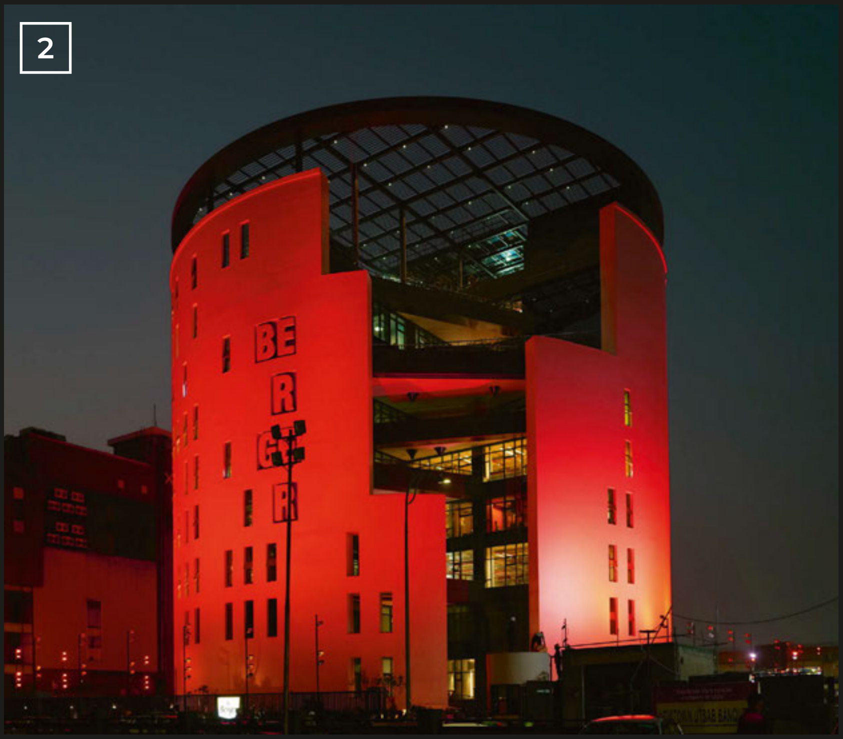

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SILHOUETTE
AWARDS

Winning Combinations

In an online ceremony held on Friday 28 February, the winning mentees for the fourth edition of the **Silhouette Awards** were revealed, with each winner paired with their mentor.

The Silhouette Awards has revealed the winners of this year's programme, recognising exceptional emerging talent in the lighting industry. Now in its fourth year, the awards continue to provide a unique platform for aspiring designers, offering a six-month mentorship with industry leaders to foster professional growth and innovation.

This year's programme received a record number of submissions from 26 countries, reflecting the awards' growing global influence. The 20 winners were revealed during a virtual celebration that took place on Friday 28 February.

This year's Silhouette Awards Winners and their Mentors are:

- Agathe Tiret, mentored by Ratna Kumari
- Allison Lau, mentored by Shahrzad Abtahi
- Anthony George Girgis, mentored by Armaghan Ahmadi Venhari
- Diana Andrea Niño Bogoya, mentored by Ximena Munoz Abogabir
- Gabriel Pinheiro, mentored by Cherine Saroufim
- Göknur Kayır, mentored by Sergio Boccia
- Ksenia Chubenko, mentored by Tim Hunt
- Lally Widelska, mentored by Philip Hammond
- Lucie Koháková, mentored by Marcos Juarez
- Lucrezia Seghi, mentored by Lee Barker-Field
- Luis Mora, mentored by Patricia Lopez Yanez
- Maya Gribby, mentored by Daniel Blaker
- Melissa Toasa, mentored by Sacha Abizadeh
- Petra Koza, mentored by Eugenia Cheng
- Petros Kitsantas, mentored by Vinod Pillai
- Rezvan Shahrabi Farahani, mentored by Maneck Tandon
- Santiago Navarro, mentored by Magdalena Gomez
- Sudipti Varadharajan, mentored by Camila Blanco
- Tiago Winer, mentored by Fabiana Nery Pardhanani
- Zahra Shojaei, mentored by Andy Powell

Over the next six months, these talented individuals will engage in personalised mentorships, enhancing their skills and advancing their career aspirations. Sudipti Varadharajan, mentee said: "I'm truly delighted to have the opportunity to share my research by creating awareness and educating the lighting design industry through guided mentorship. I see the ever-evolving lighting design industry growing as more people witness how the language of light is communicated in everything we see and are encapsulated in. I'm beyond excited to be paired with Camila, a great mentor who shares my passion for preserving and storytelling light, science, and art altogether."

Varadharajan's mentor, Camila Blanco, added: "I'm delighted to be paired with Sudipti, who shares my passion for museum lighting, making this journey even more meaningful. Over the next few months, I plan to help her refine her skills, explore new creative ideas, and confidently navigate the industry. Mentorship is a two-way exchange, and I'm excited to learn from her perspectives just as much as I share my own."

Another one of this year's parings Luis Mora, mentored by Patricia Lopez Yanez stated: "I'm grateful to have been selected and to have Patricia as a mentor. She has had an interesting career, and I'm happy to have someone to help me clarify what I want to do with my career. It's not easy these days after graduating from university and facing a world with many areas of architecture to explore!"

Lopez Yanez added: "I am honoured to be a mentor in the Silhouette Awards programme, as my own mentors have profoundly shaped my career and personal growth. To me, mentorship is about inspiring vision, challenging conventions, and shaping the future of our industry. Over the next few months, my goal is to guide Luis in refining his vision, thinking boldly and strategically, and building the confidence to carve his own path."

The programme benefits not only the mentees but also the mentors, enriching the industry by nurturing creativity and innovation. Sacha Abizadeh who is mentoring Melissa Toasa, said: "Being a mentor in the Silhouette Awards programme is an incredibly rewarding experience. It's an opportunity to support emerging talent, share insights, and

Agathe Tiret
Allison Lau
Anthony George Girgis
Diana Andrea Niño Bogoya
Gabriel dos Santos Pinheiro
Göknur Kayır
Ksenia Chubenko
Lally Widelska
Lucie Kohakova
Lucrezia Seghi
Luis Mora
Maya Gribby
Melissa Toasa
Petra Koza
Petros Kitsantas
Rezvan Shahrabi Farahani
Santiago Navarro
Sudipti Varadharajan
Tiago Winer
Zahra Shojaei
SILHOUETTE AWARDS
2025 WINNERS

help shape the next generation of lighting professionals. The industry thrives on collaboration, and I see mentorship as a two-way street – while I offer guidance, I also gain fresh perspectives and a deeper understanding of the evolving landscape of lighting."

Toasa added: "I feel incredibly excited and honoured to be selected as a mentee for this programme. As I begin shaping my career in lighting design, I'm eager to bridge the gap between theory and real-world application."

The collaboration between mentees and mentors has proven historically to be a truly transformative journey. Gabriel Pinheiro, a winning mentee from this year, is looking forward to getting the process underway. He said: "This is a once-in-a-lifetime opportunity to dive deep in yourself and leverage your career. I am so excited for the time ahead and I hope that in the next couple of months, I get to explore more about myself. I hope this helps me pause the flow of uncertainty and find a path to a bright future."

Light is more than just illumination; it is a powerful force that shapes our experiences, influences our emotions, and transforms the spaces around us. It defines architecture and plays a crucial role in well-being, productivity, and sustainability.

Rezvan Shahrabi Farahani, a mentee in this year's programme, said: "Light is not just something we see – it's something we shape, experience, and discover. As a mentee, I step into this journey seeking new perspectives, exploring different aspects of light, and refining my vision as a lighting designer."

Light also has the ability to evoke atmosphere, create connection, and even impact human health. In the hands of talented designers, it becomes a tool for innovation, shaping not only the built environment but also the way we perceive and interact with the world.

Fellow mentee Lally Widelska said: "I'm new to this space, having changed careers after a 13-year career in healthcare to pursue lighting design. However, they are deeply intertwined, and my passion is in combining the two to create spaces which support and nourish our health and wellbeing. My love of light came at an early age; growing up in the countryside and spending all day outside deepened my awareness and awe at the interplay of light in nature, and its impact on our emotions and our wellbeing. I look forward to seeing where this journey takes me and I can't wait to get started!"

Lighting design is a limitless art form, with the right vision it has the power to bring things to life. Whether it's crafting immersive environments, highlighting intricate details, or pushing the boundaries of sustainability, the possibilities are endless. In the hands of skilled designers, light is not just a tool - it's a language of expression with no limits.

Lucie Kohakova, a 2025 mentee, said: "You hold your diploma in your hands, and suddenly, you can do anything. That freedom is exhilarating, but it can also be overwhelming – even a little intimidating. It's like standing in a vast, open space with endless possibilities in front of you. I look forward to the challenges and insights that lie ahead, and I am grateful to the Silhouette Awards for creating such incredible opportunities."

As the Silhouette Awards continues to grow, its mission remains clear – to highlight and celebrate the next generation of lighting professionals. By providing a platform that builds meaningful connections between emerging talent and industry leaders, the programme not only shapes individual careers but also contributes to the future of lighting design as a whole.

When this year's participants were asked what this programme meant to them, this is what they had to say.

Maya Gribby: "I'm excited to be exploring ideas, discussing long term goals and learning more about navigating the industry. My mentor, Daniel, shares my enthusiasm for narrative-led design so I'm looking forward to starting the conversation with a common interest and picking the brain of another like-minded designer."

Petros Kitsantas said: "I am thrilled to be a part of the Silhouette Awards and excited to embark on a journey of growth over the next six months. My focus will be on deepening my understanding of light not just as an illumination tool, but as a powerful form giver that shapes space, mood, and emotion."

Santiago Navarro commented: "I am truly honoured to be part of this programme as a mentee and excited for the opportunity to learn from an experienced and talented professional like Magdalena. Over the next couple of months, I hope to develop a clear plan to achieve my objectives for the mentorship and take meaningful steps toward reaching these goals."

Allison Lau said: "I'm extremely grateful to have been recognised as a winner of the Silhouette Awards. This mentorship opportunity is truly invaluable, and I am excited to learn from my mentor's wealth of experience, insights, and knowledge."

With six months of inspiring mentorships ahead, the Silhouette Awards looks forward to seeing how this talented group will illuminate the industry with their creativity, innovation and passion. The entire Silhouette Awards team extends a huge thank you to this year's sponsors for their commitment and support to the programme, becoming leading brands investing in the future talent of the industry.

www.silhouetteawards.com

COMMENT
DR. SHELLEY JAMES

Innovators in Healthcare: the business case for circadian lighting

This April, **Dr Shelley James** is hosting an online event examining the practical applications and cost-effective benefits of implementing circadian lighting in the healthcare sector. Here, she tells us what viewers can expect from the programme.

The residential healthcare sector is under immense pressure. With an ageing population, rising demand for services, and increasingly complex care needs, care homes and healthcare facilities must find ways to improve patient outcomes while working within tight operational budgets.

Many of these buildings are decades old, with outdated lighting systems that were never designed with health and wellbeing in mind. Upgrading to circadian-informed lighting inevitably demands time and attention from a hard-pressed senior management team, an investment that can seem like a distraction in the face of urgent operational demands. For lighting professionals, while 'human-centric lighting' has featured in marketing pitches for a decade and most are convinced of the value, few can claim to have successfully delivered a project in the real world, usually citing 'value engineering' as the barrier to adoption.

Yet the evidence is clear – lighting that actively supports a healthy body clock can speed recovery from stroke, improve sleep and reduce agitation, and cut down nighttime wandering and falls, all contributing to a healthy balance sheet – and a safer, calmer working environment for staff, especially those working night shifts. This in turn improves retention and reduces sick leave. Combining the physiological effects of circadian-aware lighting with 'smart' technologies that track movement, analyse behaviour, and offer clinical insights delivers additional benefits to the bottom line.

But for many healthcare providers, scientific research on circadian lighting can feel distant from the day-to-day realities of running a care home. For lighting professionals, healthcare is often seen as a frustrating sector focused on cost not value.

The online event Innovators in Healthcare, held on 17 April, hosted by Dr Shelley James with John Bullock will bring together scientists and frontline care providers to demonstrate that circadian-aware lighting is not a luxury. It is a practical, cost-effective solution to the pressures faced by the residential healthcare sector, and, critically, when driven by a desire to deliver outstanding care can yield measurable returns on that investment.

Here are some of the topics we'll cover:

The Impact of Circadian Lighting on Stroke Recovery and Residential Care

Dr. Anders West, a leading neurologist, will present groundbreaking findings on the relationship between stroke, the body's internal clock, and lighting. Stroke is a leading cause of disability, with survivors facing a heightened risk of cognitive decline. Dr. West's research is the first randomised clinical trial to demonstrate that circadian lighting can effectively combat depression following a stroke. His work also highlights improvements in sleep, fatigue, and even physiological markers such as bone plasma and temperature regulation.

While his research has focused on stroke recovery, its implications for residential care are profound. Many stroke survivors require long-term support in care homes, where disrupted sleep and fatigue can severely impact their quality of life. Working with ChromaViso, Dr. West has applied his findings in residential settings, showing that targeted lighting interventions can reduce agitation-related behaviours by 71.2%, with some symptoms disappearing entirely.

Lighting, Shift Work, and Staff Retention in Healthcare Settings

Disrupted sleep cycles don't just affect residents – they are a major issue for the staff who care for them. Many healthcare professionals work night shifts that disrupt their circadian rhythms, leading to chronic fatigue, errors, accidents, and long-term health risks such as cardiovascular disease and

> "Circadian-aware lighting is not a luxury. It is a practical, cost-effective solution to the pressures faced by the residential healthcare sector, and, critically, when driven by a desire to deliver outstanding care can yield measurable returns on that investment."

diabetes. Poor sleep is also a key factor in staff burnout, contributing to the sector's ongoing crisis of high turnover rates and staff shortages.

Professor Shadab Rahman is at the forefront of research into how lighting can mitigate these risks. He will share several new studies, including results that suggest the potential for circadian lighting to target the specific issues faced by female shift workers through their hormone cycle.

Revolutionising Dementia Care Through Smart Lighting

Lucy Jobbins, a PhD researcher at Oxford's Sleep and Circadian Neuroscience Institute, is investigating how light exposure impacts sleep and cognitive health in dementia patients. She will share her research with WCS Care, led by Ed Russell, that includes work to characterise lighting conditions in different rooms and parts of the care home to identify the zones where these investments will deliver the greatest benefits.

Ed Russell, awarded an OBE for his contributions to elder care, will complement Lucy's presentation to share the real-world challenges of retrofitting a circadian lighting system. WCS Care was an early adopter, installing their first system over eight years ago in a new build. His team saw such dramatic improvements that they decided to invest in a retrofit installation in a 1970s building. However, the original supplier had gone out of business, leading to an ongoing collaboration with John Bullock and Commercial Lighting.

The Future of Smart Lighting in Care Homes

David Poxton is the third generation of his family involved with Ashmere Care Homes. He is passionate about striving for excellence and looking to the future – and is proof that this investment makes sound business sense: Ashmere enjoys record-breaking occupancy rates at premium prices, five-star reviews and wins prizes as an outstanding employer. David has been working with local manufacturer Circadacare to design and install a circadian lighting system in a new building, his only regret being that he didn't extend the investment to the training areas.

To quote David: "It's like electric windows in a car. Manual windows work, but once you've had the best, you never want to go back."

AI-Driven Lighting: Transforming Elder Care

At Hartland House in the Lake District, Leanne Scrogham was initially skeptical when offered the chance to trial AI-powered smart lighting. However, the results were remarkable – falls among residents dropped by 86%, confusion at night decreased, and staff response times improved dramatically.

The Nobi Smart Lighting system automatically detects movement and adjusts illumination to prevent falls, alerting staff within minutes that a resident is awake. An integrated intercom system offers the care team the option to speak to the resident, offering reassurance in real-time. Beyond sleep and safety, the system has enabled staff to analyse the cause of falls, identifying underlying medical issues that may otherwise have gone undetected.

Join the Conversation

Please join us on 17 April for this unique opportunity to learn from these experts and add your voice to the conversation.

With thanks to our sponsors: Circadacare, ChromaViso, Commercial Lighting, and Nobi. Also, special thanks to our industry partners: [d]arc media, Designing Lighting, the LIA, the SLL and The Light Review.

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[d]arc awards
CELEBRATING A DECADE OF LIGHTING DESIGN
ENTRY

Light Cycles Kyoto

Kyoto, Japan

Light Cycles Kyoto is an immersive experience celebrating Kyoto Botanical Gardens' centennial anniversary. Moment Factory, in collaboration with local partners, created this multimedia activation that pays homage to nature's beauty through light and music.

The experience unfolds across four multi-sensory zones in the garden's conservatory, revealing the hidden world and voices of plants.

The first zone, Light Will Find You, draws inspiration from the Japanese concept of komorebi, where sunlight filters through tree leaves. Laser lights and colourful mist create a dreamlike atmosphere, while music highlights nature's beauty after dark.

A wave of blue laser light cuts through the trees, symbolising the link between rainforests and rising sea levels, and inviting visitors to celebrate the flow of life in Memory of Water. Invisible reveals hidden wonders through lighting illusions, building up to a moment of deep immersion. Forest Frequencies features a swirling vortex of LED lights and dynamic sound effects, representing the search for a frequency.

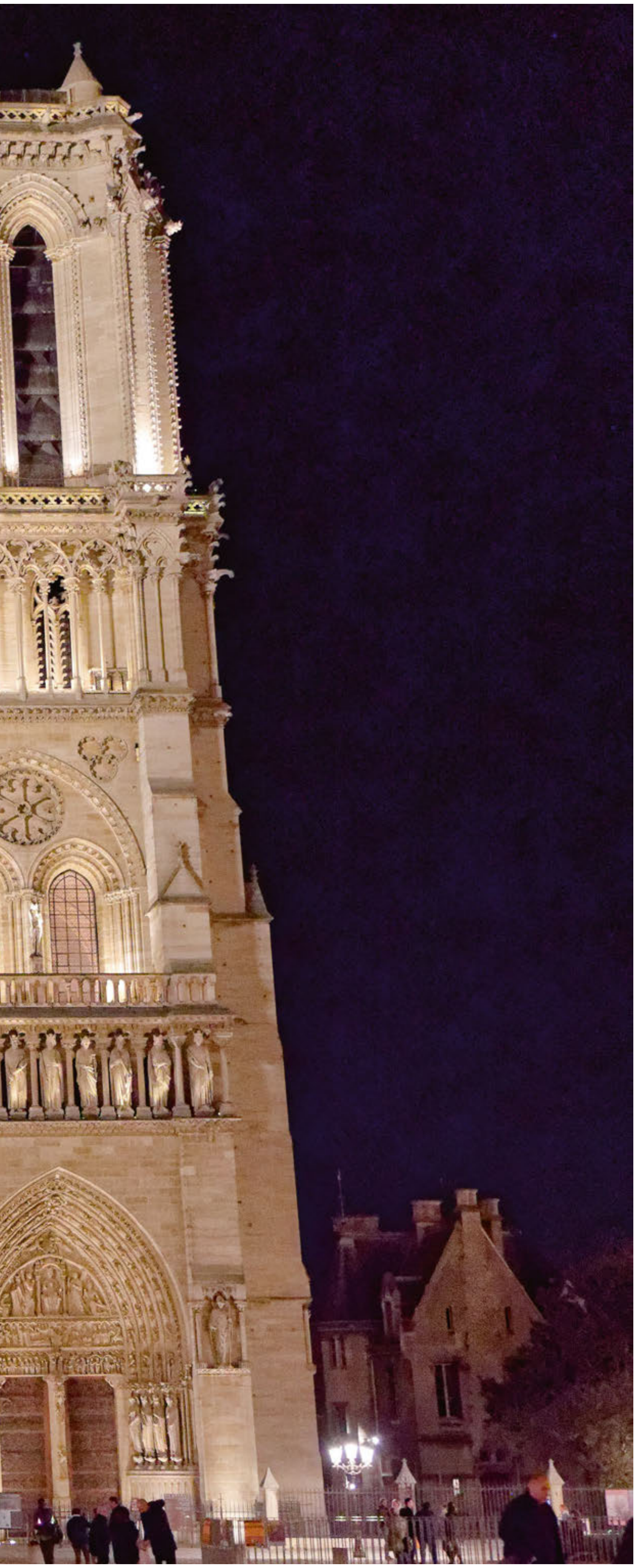
By seamlessly blending botanical diversity with cutting-edge projection mapping, light effects, and sound, Light Cycles Kyoto becomes a natural highlight for the centennial celebration of Kyoto Botanical Gardens. In 2024, Light Cycles in Kyoto drew a crowd of 80,000 visitors, boosting daytime traffic at the site.

The partnership with Kyoto Prefecture and Mitsui Fudosan Co. represents a significant milestone in Moment Factory's growing presence in Japan. With its Tokyo office established for more than seven years, the studio has spearheaded the development of numerous successful projects including The Colour Bath at Tokyo Shinjuku Station, Kamuy Lumina on the shores of Lake Akan, and Island Lumina on Iojima.

Moment Factory's global expertise and local understanding enabled the creation of an immersive experience that resonates with local audiences and tourists alike. The project was supported by an international creation and production team with members from Canada, Japan, and Australia, fostering a rich exchange of ideas and expertise.

Light Cycles Kyoto is part of a global series, having debuted in Adelaide Botanic Garden, Australia and visited New Zealand, Italy, the UK and US. This site-specific installation aims to inspire a new appreciation for plant life and foster a deep connection with nature for future generations.

www.momentfactory.com



Notre-Dame de Paris

Paris, France

Invited to the Notre-Dame de Paris for a late-night reaveal, arc’s junior journalist Ellie Walton, reports on the new lighting scheme from **Patrick Rimoux Agency**, which seamlessly adapts the ebb and flow of the cathedral.

For centuries, Notre-Dame de Paris has stood as a beacon of faith, history, and architectural marvel. When the cathedral caught fire in April 2019, the world watched in horror as flames ravenously devoured its roof until it ultimately caved in. Recognised as one of the ecclesiastical foundations of Gothic Europe, the tragedy resonated deeply across the continent – even those who had no affinity towards God or spirituality.

The restoration was an immense undertaking, costing approximately €850m, 2,000 craftsmen, including skilled quarrymen, carpenters, and master stone cutters from 250 companies. Leading the architectural project was architect Philippe Vilenneuve, assisted by Rèmi Fromont and Pascal Prunet. Keeping to his promise that the doors of Notre-Dame will be open again to the people in five years, the beloved building opened on 7 December, in time for Christmas.

Light has always been a symbol for the divine – some may call it a vessel for the holy spirit – from the glow of candlelit vigils to the way the sunlight filters through stained-glass windows. However, for the first time in Notre-Dame's history, every beam of light is precisely orchestrated to elevate both visitors' and worshippers' experiences. With more than 2,100 individual light sources, the new lighting system adapts to the rhythm of the day, shifting intensity to guide moments of prayer, reflection, and awe. Designed by Patrick Rimoux Agency, this cutting-edge system seamlessly blends technology, artistry, and spirituality, illuminating every sacred detail of the cathedral like never before.

Before the restoration, the Notre-Dame was known to be very dark, with no original lighting scheme and during the day mostly relied on natural light through the stained-glass windows. The role of the new lighting scheme is more than just to illuminate – it acts as a storyteller, a guide, and a bridge between earth and heaven. The system offers a range of lighting scenarios tailored to different moments in the cathedral's daily and yearly schedule while architectural lighting highlights the gothic structure, emphasising its soaring arches and intricate stonework. Liturgical lighting adapts to the services, creating an atmosphere of reverence and contemplation through subtle shifts in brightness and warmth, with additional concert lighting installed for performances, ensuring the space can be used for artistic and cultural expression.

Each scenario is carefully programmed using more than 2,120 LED sources and advanced DMX technology, allowing seamless transitions. For example, during Easter, when the focus is on Christ's suffering and resurrection, the lighting shifts to cold tones, evoking solemnity. In contrast, evening services feature warmer hues, symbolising a sense of peace and closure.

The lighting team's involvement in the project transpired in an untypical fashion after being chosen by officials, recommended for their lengthy portfolio of liturgical work, including the Cathedral of Saint Nicholas in Nice. They understood the project needed the right balance between ambient architectural light from a tourism standpoint but balanced with the right amount of cinematic lighting to enhance the experience of worship.

Speaking with arc at the event, Rimoux recalled: "When the building officially reopened, I was told a woman who came for service was so moved by the lighting, it had brought her to tears. She said the light had brought God back into the church."

The harmonious interplay of light that ensures that every visitor – whether a worshipper, tourist, or musician – experiences Notre-Dame in a way that feels immersive and deeply meaningful.

The lighting system is designed to be both powerful and precise, but it was essential to ensure the architecture and atmosphere weren't overwhelmed with light. At the heart of this transformation is an advanced network of LED light sources, each individually controlled from the central room. This level of precision allows for seamless adjustments in intensity and colour temperature, ranging from a warm glow of 2200K to a crisp white light of 5000K. The ability to fine-tune these settings means that every moment inside the cathedral – whether a solemn prayer, a grand ceremony, or a concert – is accompanied by light that enhances the experience.

Throughout the day, the lighting changes subtly every seven minutes moving through warm and cool tones, guiding the visitors in a visual journey. During this rhythmic transformation, one can experience a sense of movement within the space, which invites the visitors to view the space in a new perspective – or a new light if you will – mirroring the passage of time.

To maintain the cathedral's visual integrity, the system was designed with minimal disruption meaning, instead of electronic modules and power drivers near the floodlights, they were installed in technical rooms within stands. This required an intricate web of 40km cables, connecting over 600 drivers across 16 ventilated and fire-safe technical spaces. This installation, managed by Gaudillère Electricians with an eldoLED controls system provided by Soliled, ensures that the light remains as unobtrusive as possible, while delivering a remarkable level of control.

A fibre-optic network links the technical rooms to the central control hub, using industry-standard DMX protocol to manage the static compositions and adjust the illumination for services, concerts, and events. Ultimately ensuring that Notre-Dame's lighting is not only beautiful but adaptable.

More than its aesthetic upgrade, the new approach to light within the Notre-Dame renovation has created a bridge between the cathedral's centuries-old heritage with modern-day technology. At its core, the project is about preservation, but the lighting has allowed Notre-Dame to evolve with the possibilities that come with modern technology in a way that does not disrupt tradition. Light has always played a crucial role in the spiritual and architectural experience of the cathedral, and the new system ensures that it continues to do so in a way that is both respectful of tradition and attuned to contemporary needs.

What is truly remarkable about the new lighting system is its ability to serve multiple purposes, with more than 60 carefully crafted lighting compositions, the system is incredibly flexible to create deeply immersive experiences for each occasion.

However, despite its cutting-edge nature, the system is designed to be almost invisible. The technical infrastructure remains hidden, allowing the cathedral's architecture to take centre stage. The installation process itself was a meticulous endeavour, requiring delicate work within the structure's ancient walls. Every element of the design, from the placement of projectors to the careful calibration of light intensity, was executed with the goal to preserve the integrity of the space while enhancing its atmosphere. Beyond the physical transformation, this project also speaks to the cathedral's enduring place in history. The lighting design is not just about lighting the cathedral, it is about revealing it. The interplay of light and shadow brings out the depth and detail of the stonework, offering visitors a renewed appreciation of the artisanal craftsmanship that has defined Notre-Dame for more than 850 years.

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Lighting Design: Patrick Rimoux Agency, France
Architect: Philippe Vilenneuve, Rèmi Fromont, and Pascal Prunet, France
Installation: Gaudillère Electricien
Lighting Specified: Derksen Lichttechnik, eldoLED, Osram, Pathway Connectivity, SILL, Soliled, Thorn Lighting, Zumtobel
Photography: Julio Piatti, Yanick Boschat

In this instance, light has been used as a tool of revelation, the new system invites people to engage with the cathedral in a more profound way, encouraging contemplation, wonder, and a sense of connection to something greater than them.

In a sense, the new lighting of Notre-Dame is more than just a restoration of a building, it restored something spiritual back into the cathedral. It allows the cathedral to speak in a language of light, carrying a story for generations to see. As cathedrals go, its broader restoration stands as a testament to the power of renewal.

Through carefully choreographed illumination, the cathedral's architectural splendour and spiritual essence are revealed with a newfound perspective. Every beam of light serves a purpose, from guiding visitors through history, marking the rhythm of daily worship, and elevating special ceremonies into transcendent moments.

With its unprecedented level of control, the lighting scheme seamlessly adapts to the ebb and flow of the cathedral's life, shifting in response to time, season, and liturgical significance. Whether casting a cool, sombre glow for Easter or bathing the nave in warm radiance at the end of the of day, the system ensures that each moment within Notre-Dame is framed with intention. The interplay of technology and artistry creates a space that is not only illuminated but alive. Thanks to the vision of Patrick Rimoux Agency, light has become an integral voice in Notre-Dame's next chapter. It is a voice that speaks of reverence, beauty, and renewal.

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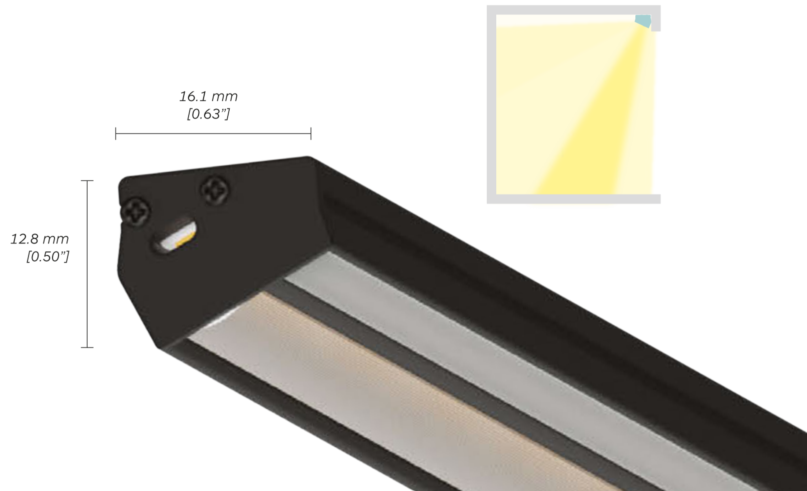
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> “It is the best high that you can have. When you do a light and sound show, and you see people come to watch it, and at the end, they applaud as if you are on stage, that’s a rush.”

Koert Vermeulen

With an eclectic portfolio of stunning projects around the world, from Guinness World Record-breaking installations to Olympic opening ceremonies, **Koert Vermeulen** has established himself as a great of lighting design. As his company, ACTLD, celebrates its 30th anniversary this year, arc editor Matt Waring talks with Vermeulen about his origin story, and his lighting vision.

In Rotterdam, Netherlands, in October 2019, at the final PLDC event’s closing Gala Dinner and Awards Ceremony, proceedings opened with an immersive, dazzling light show. So impressive was this audiovisual performance that the moment it finished, the event organisers called to run it back, much to the delight of the guests in attendance.

This was my first experience of the work of Belgian lighting maestro Koert Vermeulen, and his studio, ACTLD (formerly ACT Lighting Design, now ACT Live Design). As Vermeulen celebrates the 30th anniversary of the studio this year, on reflection, this short, three-minute performance was just the tip of the iceberg when it comes to the incredible, richly diverse works of experiential, entertainment, and architectural lighting design that the studio has made its name crafting.

Over the years, Vermeulen has created projects of all scopes and sizes around the world, from Olympic Games opening ceremonies, to Guinness World Record-breaking art installations, and vast pavilions at World Expos.

With roots in both entertainment and architectural lighting, Vermeulen and ACTLD have built a broad portfolio of projects where, working with forward-thinking clients, they have used technology, multimedia, and narration to design, develop, and deliver dynamic experiences worldwide. As a studio, ACTLD mixes what it calls “Entertecture” and “Architainment” into “Experience Design”.

Speaking to arc magazine as he begins celebrations for ACTLD’s 30th birthday, Vermeulen takes us back to his first fascinations with light, dating back to his childhood in Antwerp, Belgium.

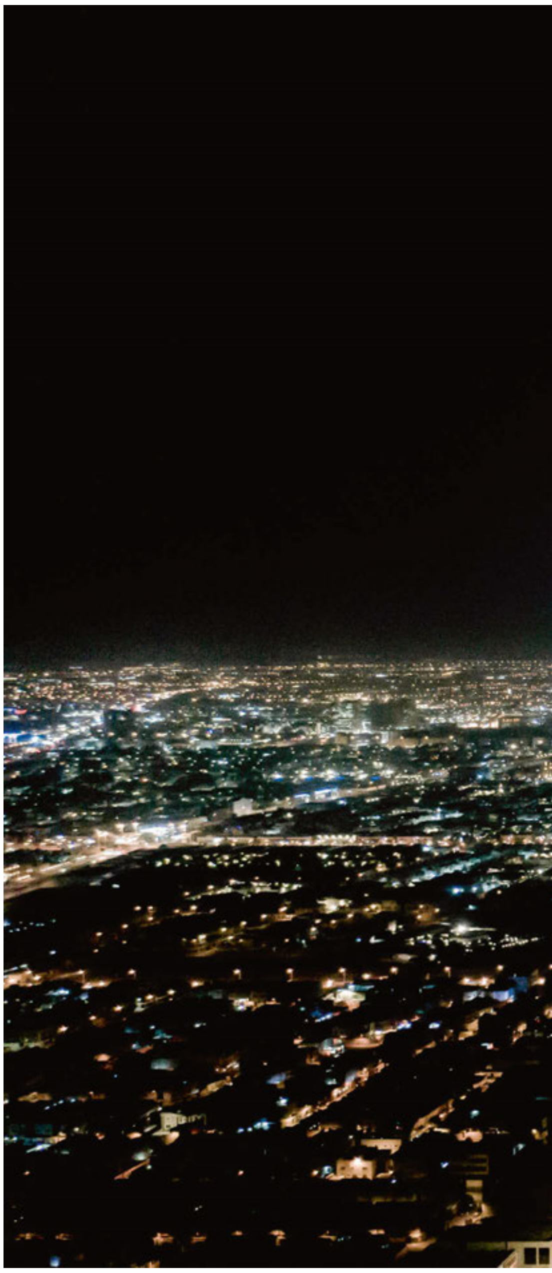
“When I was 11, 12-years-old, two of my older neighbours across the street from me – who were 15 at the time, had what they called a disco bar, with a DJ set up, two turntables, mixing desks, loudspeakers, etc, and they used to play shows for student houses, the Scouts, things like that. They did it to hang out with girls, so while they were doing that, they needed someone to put on the records. As I was younger, they brought me in to help – I had to stand on a beer crate to reach the desk at first, but they introduced me to this world.

“They had a couple of lights already, but over the years, as I started to get a bit of money, I bought some more lighting equipment, and a sound to light modulator, and would start putting on light shows while they were working on the music.

“But when I was 14, one of them got his girlfriend pregnant, the other one was doing bad at school, so they left all of the equipment with me. So, all of a sudden, I had all this sound equipment, my own lighting equipment, and that was the basis of my first, unofficial, business. It was more like a rental place than a design studio, but we did fashion shows, concerts, town fairs, whatever we could find.”

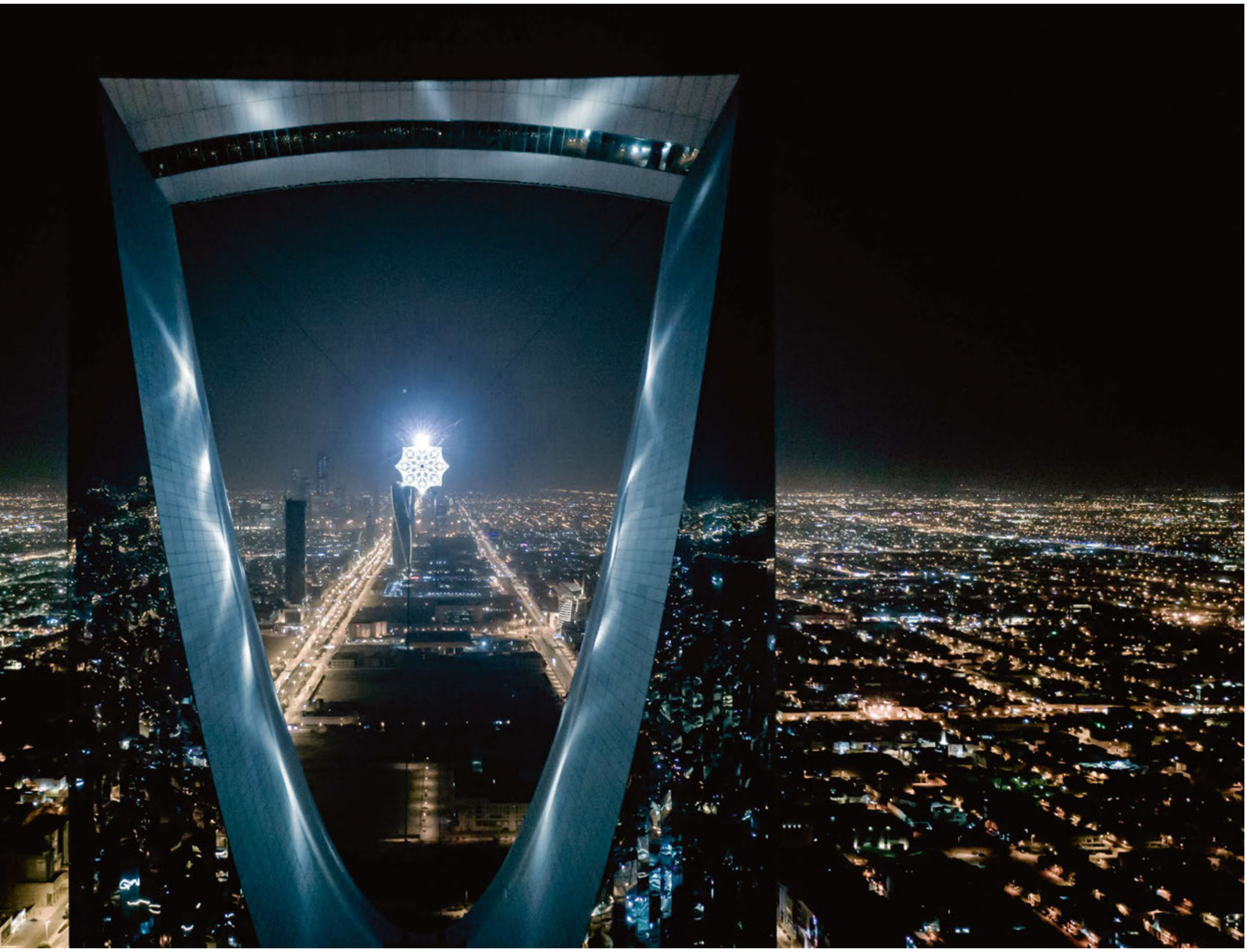
Not long after this though, while Vermeulen was still a teenager, he had an epiphany, which steered him from his DIY, grassroots approach into something more tangibly connected to lighting design.

“We were doing a very small setup for a concert of promo tours in Antwerp, and an English band came in, their tour manager saw my equipment and said ‘what is this? It is like amateur hour’.



“He took all of my disco equipment, put it on stage, and made what I would call a lighting design with the equipment that I was used to seeing just flicker. I was so interested in that part that from then on, putting on records was less and less my thing, and I was doing more of the lighting.”

And so, after Vermeulen finished high school, as well as running his own company, he went to architectural school in Brussels, specifically because it offered a 40-hour lighting course – the only lighting course that he could find at the time. However, the tenacity and drive of young entrepreneurship meant that, in 1989, Vermeulen cut his studies short and focused full time on his now official company, dubbed Antwerp Stage Productions.



Star In Motion, Noor Riyadh, Saudi Arabia, 2021 (Image: Noor Riyadh)

> “What I love about doing technical shows is there are no people there for you to have a human connection with, but through implicit storytelling, I see people after the show, and they have inserted their own protagonist into the world you have created. It’s so open to interpretation.”

Now under the more official guise of ASP, Vermeulen and his team picked up where they left off, albeit at a much bigger level, working on fashion shows for the higher profile houses, and helping out on larger concerts as they came through town.

"They would need stagehands, roadies, and technicians, and we were able to provide that," he says.

"I would always try to make friends with the lighting people so that they would give me the good jobs. I was working on one of the Pink Floyd shows, and they saw that I was intelligent and knew what I was doing, so they kept me around, and asked if I wanted to see the concert with them at the front of house, where I could see how they did the show."

It was through jobs like this, attending various trade shows, and building a library of books and magazines on architecture, light, art, and entertainment (a library that now reaches around 2,300 books) that Vermeulen began to fully understand lighting design in a more formal sense, having previously been self-taught, save for his brief stint at university.

However, after five successful years with ASP, where Vermeulen and his team rented out stagehands and technicians for the likes of Michael Jackson, U2, Genesis, and Tina Turner, he wanted to focus more fully on lighting design as a profession; as such, at the end of 1994, he left ASP, and established Art-Concept-Technology – ACT.

Light Moves, Brussels, Belgium, 2019

The early incantation of the studio saw Vermeulen continue to work on larger and larger fashion shows, but his big break, he recalls, came on a project called Tour de Cites – a tour of various historical sites across Belgium, where he had to devise a lighting scheme for each location virtually on the spot, as the truck of equipment was being unloaded.

"It could have been anything from a mountain to a fort, to a cathedral, and over two summers we did 50 sites. That was a learning curve where I had to, very quickly, decide what would work from a limited amount of equipment. I would direct where to place fixtures as they were coming out of the truck, and we would have an evening to programme it and create the mood.

"People saw what we were doing and what we were illuminating, and we were asked if we could do something permanent – this is how we got into architectural lighting. Entertainment lighting was always the basis for us, and architectural lighting came after that."

As Vermeulen looked to move more into the architectural lighting sector, he called on compatriot and fellow lighting designer Bruno Demeester to join him at ACTLD, after the two connected as the only Belgian members of the IALD at the time. Working together, the two were able to fuse Vermeulen's artistic prowess with Demeester's technical nous.

"In the beginning, Bruno would take care of the architectural projects, and I was just there for the big ideas. We were asked to come to a site, and within 10 minutes, my design was ready, and I started to explain it to the client, because my background was to always be very quick, you didn't have time to do designs and think about the process, so I was always very immediate in getting a visual idea in what I wanted. But Bruno was really great at the technical side that I was slightly less interested in.

"Of course, over the years, I learned. Then we got a very big client who was doing shopping centres, and they were interested in made to measure stuff, video, LED tiles, so that was a nice combination of the artistic and technical aspects."

Vermeulen's vision, and ability to almost immediately craft a lighting concept in his mind is something that he feels is his "USP", but he says that he has, over time, learned to slow this process down, and allow his team instead to speak first and come up with their own ideas.

"Some of my clients really love that I can look at something, and in a meeting, I can come up with ideas, which sometimes stick and become the solution, sometimes they don't. But I think they like the fact that you show you're interested, that you're enthusiastic, and that even without a contract, you are willing to share your ideas.

"What I did learn over the years is to keep my mouth shut. When we brainstorm for a project, I learned that the moment I started to explain my ideas, most of the team would nod and say 'yes, let's do that'.

"Instead, I told them that I've got my ideas, but I'm going to them first, I'll give them some time, and then we'll reconvene and discuss."

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“Es Devlin has that same drive for innovation that Mark Fisher had. If she were to call me, she wouldn’t have to ask twice. But unless it is Bono, U2, Genesis, etc, I don’t have a wishlist of people I absolutely want to work for.”

As the company continued to grow, Vermeulen explains that around half of the designers on staff were focused on the architectural side, with the other half looking more at entertainment and experiential lighting projects. Although, he says that there have been occasions where the lines became more blurred.

“I was always able to jump in when the projects needed the pazazz and the colour, or the new data,” he says.

“If you look at most of our architectural lighting, there is a trace of entertainment in there. But it has evolved – in the beginning, before video really came in, a lot of people in retail and leisure wanted coloured lighting, so we did a lot of that. As we’ve progressed, the lighting is a bit whiter than we were doing 20 years ago, but it is still dynamic, so it has that entertainment feel to it.

“I don’t think we have ever done a shopping centre without DMX – perhaps that is the cutoff. DALI is much more suited to the architectural field, so maybe our entertainment influence is bringing DMX into the architectural lighting control world.”

However, whatever field Vermeulen and ACTLD is working across, from architectural, to entertainment, experiential and art installations, the notion of storytelling always remains. This, as he explained during his presentation at Light + Intelligent Building Middle East in Dubai this January, can vary from explicit storytelling to more implicit and experiential forms.

“I read a book once that talked about the comprehension of storytelling, and not just in the traditional sense that you would find in a book or a film, and so I brought that into the methodology of our working process here,” he explains. “In most architectural projects or art installations, the story is mostly an existential, experiential kind of story. Sometimes it can be a little bit explicit, for instance, we did a big project for the Zenit Arena in St Petersburg, Russia, where we used storytelling to portray the experience of a father and son going to a football match.

“But when you are an implicit storyteller, what I love about doing technical shows that run three, four times a night, it is a 10-15 minute show on a cathedral with video mapping, etc, and there are no actors. There are no people there for you to have a human connection with, but through implicit storytelling, I see people after the show, and they have inserted their own protagonist into the world you have created. It’s so open to interpretation. Everybody sees something different, and that’s cool. You make that emotional connection with people in that way. If you can bring that, and keep that in your design phases, then I think you will have a successful project.”

Vermeulen is no stranger to successful projects, having curated a vast and diverse portfolio of amazing works across a variety of sectors. Although a few landmark projects are displayed on posters in his studio – OVO, one of his first art installations that has gone on to tour the world, the Tree of Life from Expo 2015, and Light Moves, a one-night-only show created to celebrate his own 50th birthday – he says that to pick a favourite is akin to asking a father to name his favourite child.

“It’s not that you don’t have favourites, but they change over time,” he says. “Almost every five years, I have a change, a big event that changes my perception, or the direction that we are going. But I would definitely say that the Singapore Youth Olympics in 2010, even more so than the Beijing Winter Olympics in 2022, would be a highlight, because it was our first one.

“The Expo 2015 installation was probably my favourite project until 2022; OVO was our very first art installation, which I put together with Star in Motion [the Guinness World Record installation created for Noor Riyadh 2021 and displayed on the city’s Kingdom Tower].

“I would also add Puy du Fou, because it is my favourite client from over the years. We did 10 or 11 shows with Puy du Fou, and all of them are amazing.”

Regardless of which project is a favourite, Vermeulen hopes that in each work, be it a performance, installation, or work of architectural lighting, the lighting can create an emotional response in the viewer.

“It is the best high that you can have,” he says. “I have never taken heroin, but I imagine that it is better than heroin. When you do a light and sound show, and you see people come to watch it, and at the end, they applaud as if you are on stage, that’s a rush.

“Every time we did a Puy du Fou show, I saw 14,000 people stand up and give almost 10 minutes of applause. I know that there are 1,500 people on stage, but it gives me a rush to know that without the lighting, nobody would see them, they would be in the dark.

Tree of Life, Expo 2015, Milan, Italy, 2015

Youth Olympic Games Opening Ceremony, Singapore, 2010

Puy du Fou - Cinéscénie, Les Epesses, France, 2019

"I know that there can be a huge emotional response to lighting. I learned very early on, when I was light jockeying in one of the best clubs in Antwerp, I said to the DJ 'put on the best three songs of the week, and I will work against you, and do bad lighting'. He played the songs, and some people went to the dancefloor, but I said to him half an hour later 'do the same thing, and I will work with you' and it really ramped up. So, in that club, in the late 80s, I learned of the power of lighting.

"One of the most important graphical lighting designers of his time, Richard Pilbrow, said to me at a conference, that it is not where you put the light, it is where you don't put the light. It's as important. It's also direction, it's mood, that's the emotion that you can bring.

"So, I think that is one of the things that I always try to convey or to obtain, is that people have that emotion when you bring something in front of their eyes."

Over the course of our conversation, Vermeulen mentions several names that have inspired him in the past – artists and visionaries such as Patrick Woodroffe and Mark Fisher ("he's the GOAT"). And while there are some artists out there that he would love to collaborate with, he feels he is in a fortunate enough position to be more selective with his clients these days.

"Mark Fisher had the vision, and he was really innovative, which I see now in Es Devlin. She has that same drive for innovation that Mark had. If she were to call me, she wouldn't have to ask twice. But unless it is Bono, U2, Genesis, etc, I don't have a wishlist of people I absolutely want to work for. For the most part, I like to work for people who I admire but who are also generally nice and respectful and can work with a team.

"I have had my share of toxic people that I have had to work with. I also now have the luxury of saying no to people that I don't like – it's not nice when you're in a toxic atmosphere, where you feel that you are not adding value, or there's no synergy."

When it comes to dream projects though, Vermeulen says that, while ACTLD never had an explicit "mission statement", he does have a bucket list of projects he hopes to complete – a list that is nearly fully checked off.

"Six or seven years ago, we tried to write a mission statement, but we had real difficulty with it. Essentially, when I started out, I thought that I had a cool logo and a nice name, and that was more than good enough. We never thought about anything else. I think those kinds of phrases didn't even exist when I started out.

"However, at some point, I made up my mind that, in my life, I wanted to do a big show in Vegas, I

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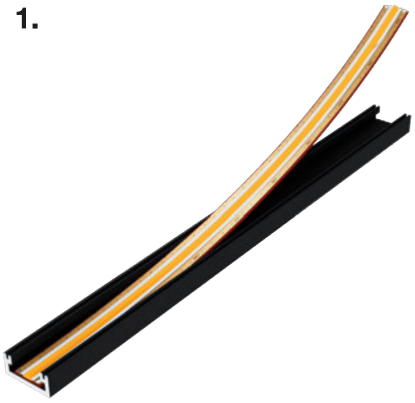

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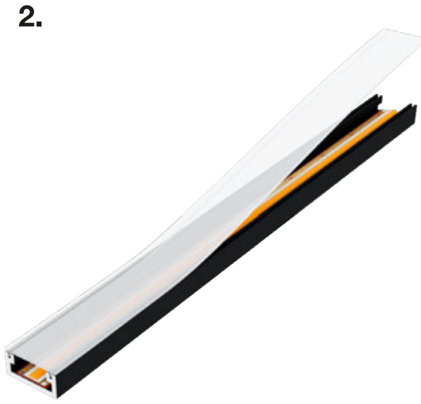

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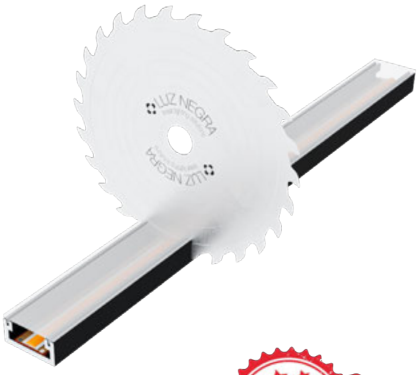

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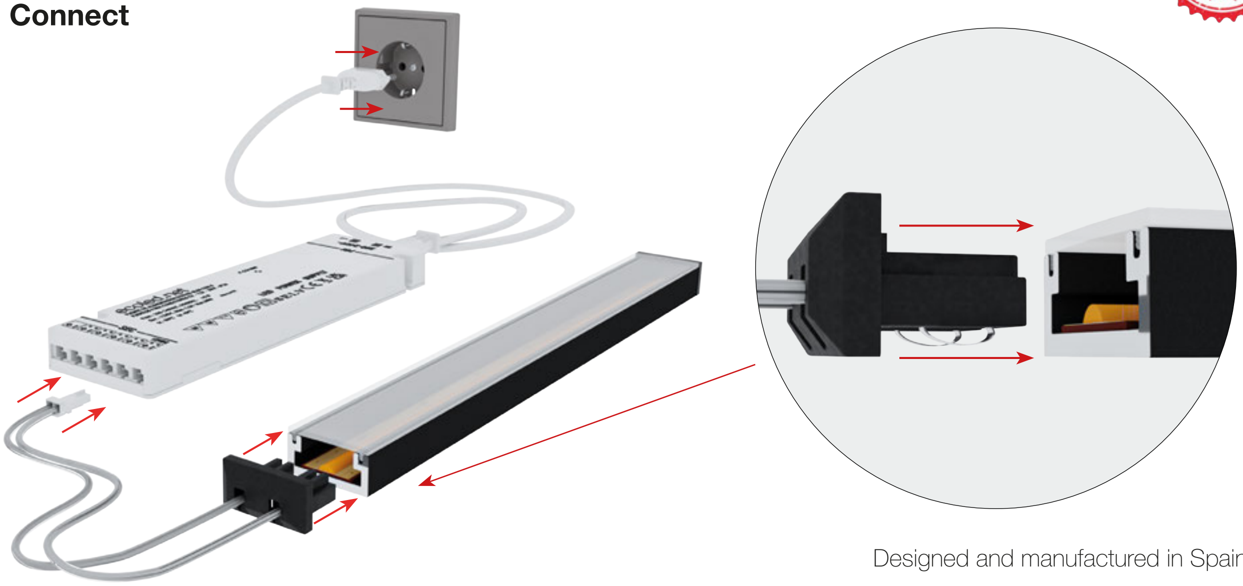

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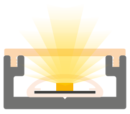

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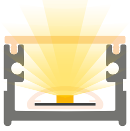

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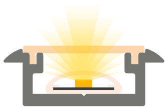

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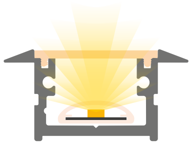

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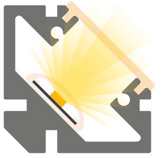

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Erasmus Bridge, Rotterdam, Netherlands, 2017

wanted to do an Olympic Ceremony, a show on Broadway or the West End, and a big, global tour. Those were the four goals that I had. My mission statement, if you could call it that, was therefore all about the projects."

As he looks back on his portfolio of projects, Vermeulen tells me that this wish list is nearly complete. "Alongside the two Olympic ceremonies, we did the Vegas show with Le Rêve – I think I was the youngest ever lighting designer doing a $100 million show in Vegas at that time.

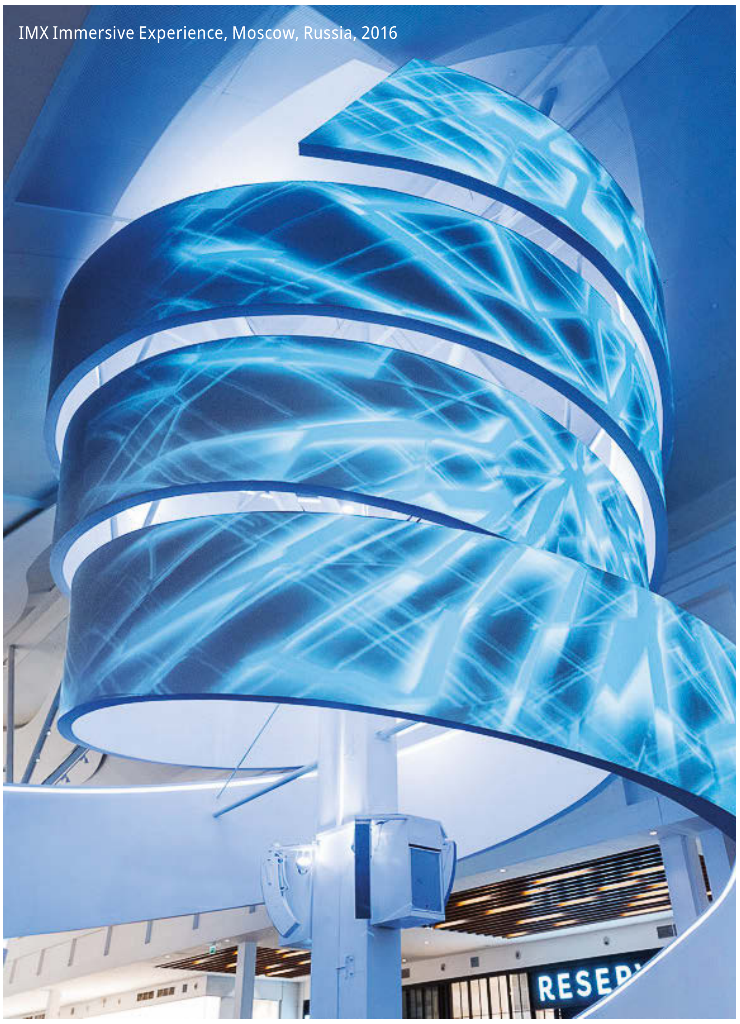
"I also worked on a Broadway show in New York, but unfortunately, during that process, the composer died, and the show never saw the light of day. So, the only thing that is still on my list is the big, international touring concert.

"However, we are currently working on some very interesting stuff that we think will create a new paradigm shift for the concert world and live entertainment. It's a show that will hopefully be at three festivals next year, so if that comes off then I can finally do the fourth element of what I dreamed of 30 years ago."

As Vermeulen looks to the future, he is also keen to embrace emerging technology to further enhance his design work. While he feels that the likes of drones are "passé", he is intrigued by the ongoing advancements in AI.

"I think that AI will be a very important tool that will be used. I already use AI in a lot of our processes here, and while I don't feel that within my generation I will be replaced by AI, I do think that some of our juniors – or at least what they do in the process – will be replaced by AI. But I think that this is a good thing, as those juniors will be free to do more important stuff, more creative work. I am a big believer that curation is becoming the most important part of the creative process.

"When it comes to what we can do, our mind is so limited; if we are creating scenes, we can create maybe three options, and then effectively our mind is blocked by the things that we have already created. But through AI, we can easily create 10 scenes – they may not make a lot of sense, but it can continue to make permutations in which our mind is blocked.



IMX Immersive Experience, Moscow, Russia, 2016

OVO, Fête des Lumières de Lyon, Lyon, France, 2010 (Image: Lucia Carettero)

Parc du Cinquantenaire, Brussels, Belgium, 2021

"Our role will therefore develop so that we can curate what AI gives us, and find the solution that works the best, so curation will be a continuing factor of our creative process."

As for upcoming projects, aside from the touring festival show, Vermeulen is sworn to secrecy on a number of works that will, on completion, be very high profile. Central to ACTLD's work going forward, will be research and development, through the studio's in-house Innovation Lab. Here, Vermeulen and his team will look to spearhead research in three key areas – storytelling, design processes, and systems design – with the goal of continuing to further enrich the experiences that it delivers.

In the meantime, Vermeulen is currently mulling over how best to celebrate ACTLD's 30th birthday. "I don't yet know what we will do with it," he says. "We had a big celebration for the 20th anniversary – the Museum of Contemporary Arts in Brussels gave us a whole floor, and we held a kind of expo, with media displays, Puy du Fou gave us costumes, and we had about 400 visitors from around the world for a party.

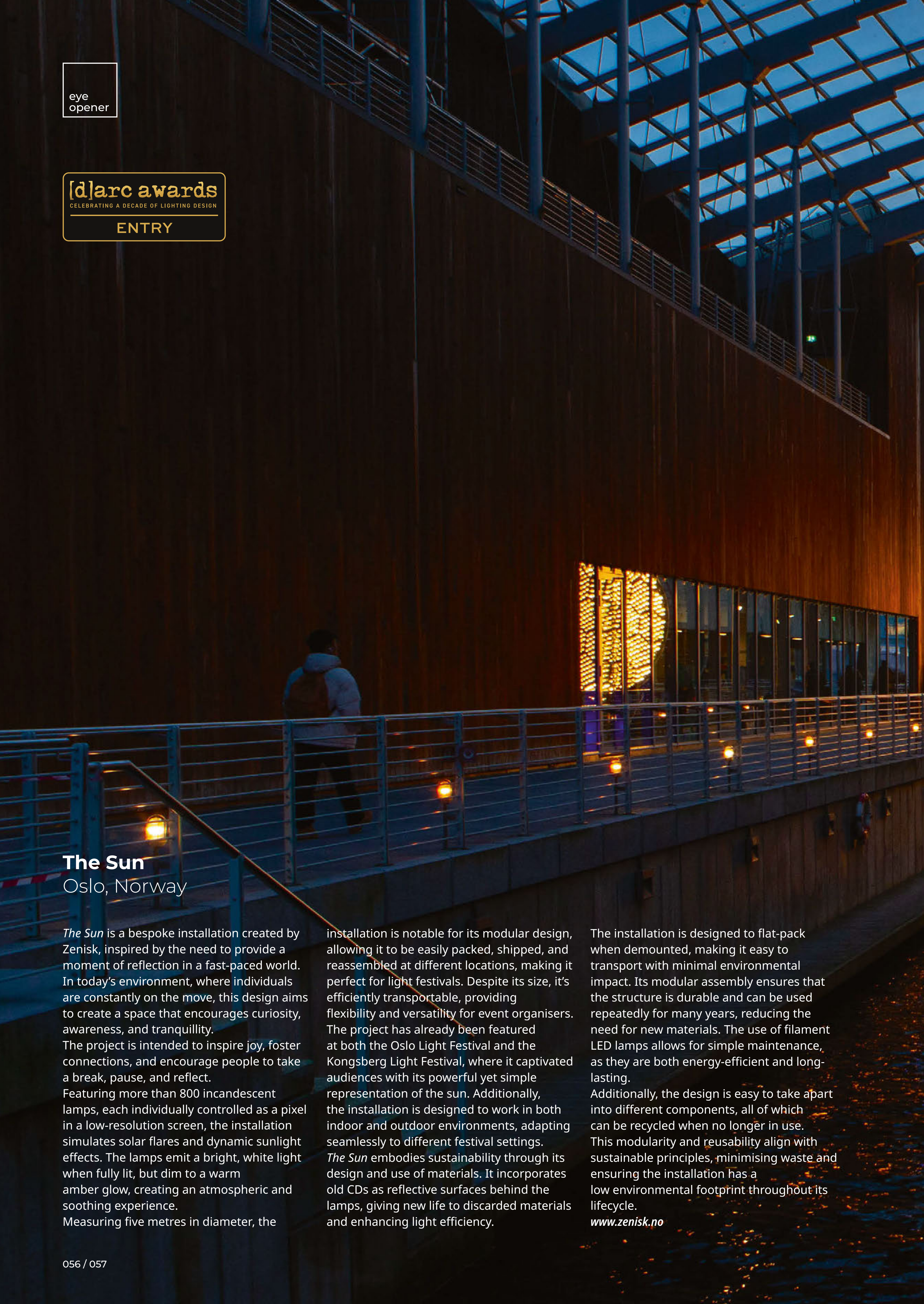
"For the 25th, I made three art installations; ACT originally stood for Art, Concept, Technology, so we did an installation on Art, one on Concept, and one on Technology. We also had a big party with around 380 people there.

"So, for the 30th, the only thing I said was that I wanted to push it to the summer, as the previous events were in January. So, this summer I am going to do something. I don't know what yet, but it is coming."

If Vermeulen's staggering portfolio is anything to go by, whatever does come, it will be something special. Watch this space.

www.actld.com

[d]arc awards
CELEBRATING A DECADE OF LIGHTING DESIGN
ENTRY



The Sun

Oslo, Norway

The Sun is a bespoke installation created by Zenisk, inspired by the need to provide a moment of reflection in a fast-paced world. In today's environment, where individuals are constantly on the move, this design aims to create a space that encourages curiosity, awareness, and tranquillity.

The project is intended to inspire joy, foster connections, and encourage people to take a break, pause, and reflect.

Featuring more than 800 incandescent lamps, each individually controlled as a pixel in a low-resolution screen, the installation simulates solar flares and dynamic sunlight effects. The lamps emit a bright, white light when fully lit, but dim to a warm amber glow, creating an atmospheric and soothing experience.

Measuring five metres in diameter, the installation is notable for its modular design, allowing it to be easily packed, shipped, and reassembled at different locations, making it perfect for light festivals. Despite its size, it's efficiently transportable, providing flexibility and versatility for event organisers.

The project has already been featured at both the Oslo Light Festival and the Kongsberg Light Festival, where it captivated audiences with its powerful yet simple representation of the sun. Additionally, the installation is designed to work in both indoor and outdoor environments, adapting seamlessly to different festival settings.

The Sun embodies sustainability through its design and use of materials. It incorporates old CDs as reflective surfaces behind the lamps, giving new life to discarded materials and enhancing light efficiency.

The installation is designed to flat-pack when demounted, making it easy to transport with minimal environmental impact. Its modular assembly ensures that the structure is durable and can be used repeatedly for many years, reducing the need for new materials. The use of filament LED lamps allows for simple maintenance, as they are both energy-efficient and long-lasting.

Additionally, the design is easy to take apart into different components, all of which can be recycled when no longer in use.

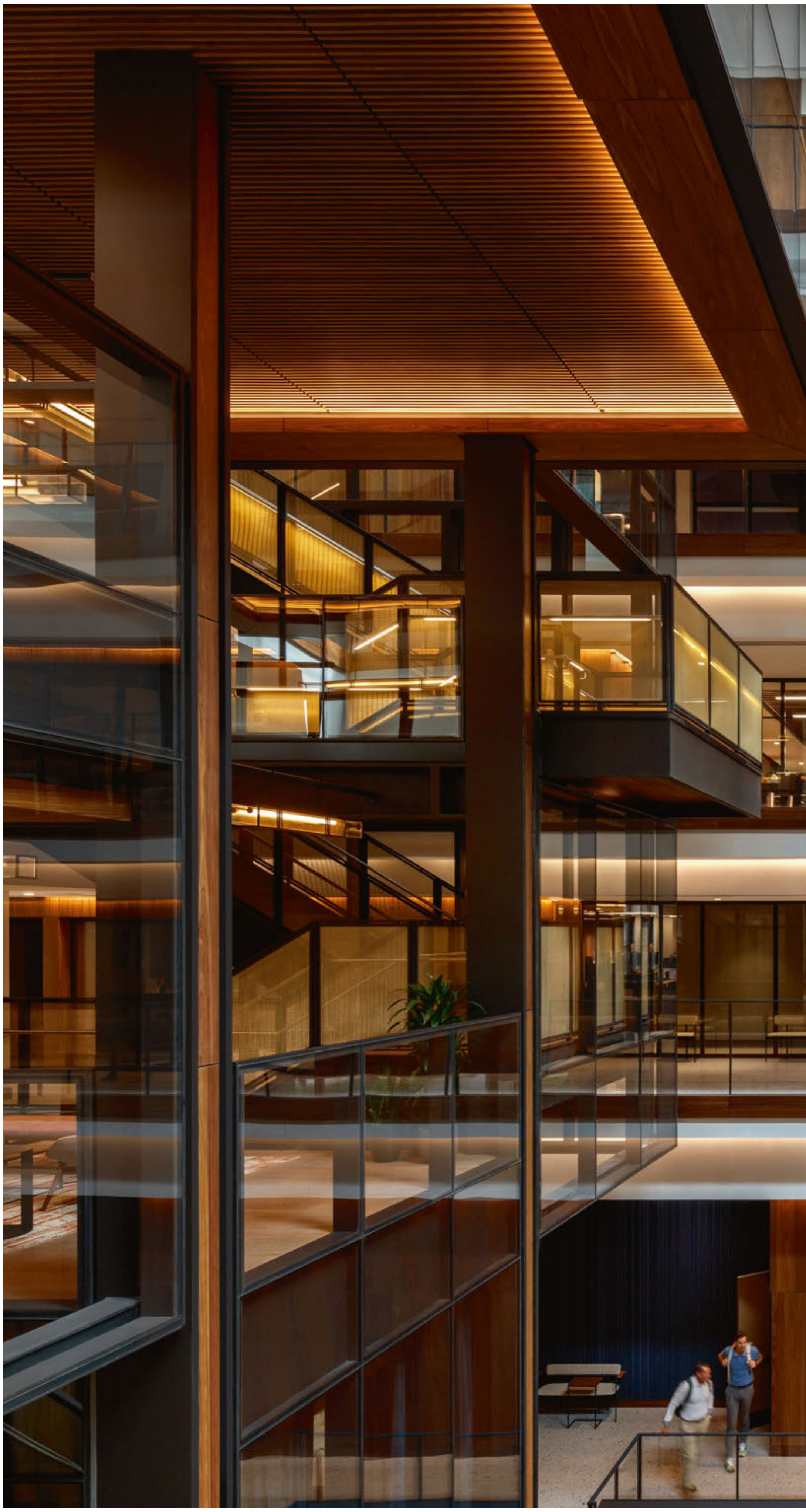
This modularity and reusability align with sustainable principles, minimising waste and ensuring the installation has a low environmental footprint throughout its lifecycle.

www.zenisk.no

Image: Mara Hein

John Hopkins University Bloomberg Center
Washington D.C., USA

[d]arc awards
CELEBRATING A DECADE OF LIGHTING DESIGN
ENTRY



Located on Washington D.C.'s Pennsylvania Avenue, the former "Newseum" building has been transformed into a world-class academic facility. **SmithGroup** oversaw the lighting design for this renovation.

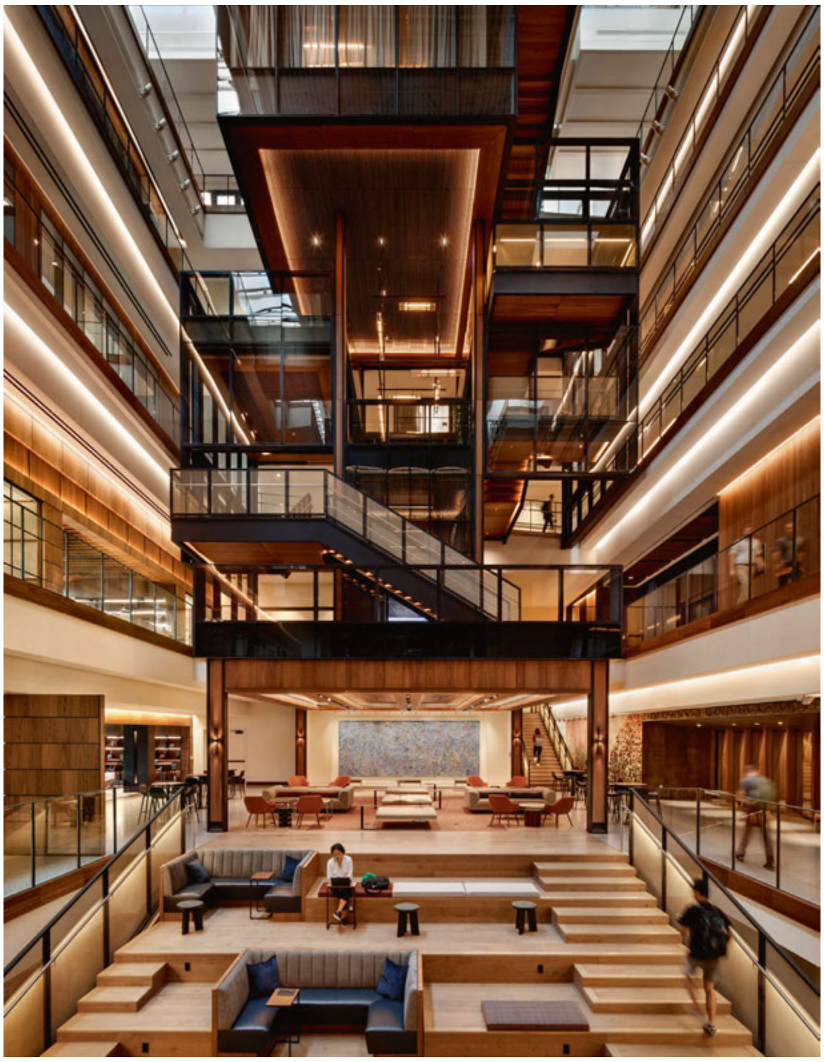
2

In 2020, John Hopkins University acquired the "Newseum" building, located on Washington DC's Pennsylvania Avenue, with the goal of establishing a prominent local identity, creating a world-class academic building, and establishing a convening destination for trusted academic experts and global policy leaders.

Leading the design for this revitalised space was a partnership between SmithGroup, Ennead, and Rockwell Group, with SmithGroup leading the lighting and daylighting design services for both the exterior and main atrium/adjacent spaces.

Throughout the process, SmithGroup worked closely with all three architecture groups to create a cohesive lighting solution that would reinspire and craft a new narrative for the renovated building, emphasising the warm material palette and volumes within the atrium space and establishing the building's presence along Pennsylvania Avenue, while remaining respectful of the nearby national monuments and streetscapes.

To do this, SmithGroup worked to a lighting concept dubbed "Revealing Impression". This unique yet respectful lighting character alludes to the opportunities created when new ways of thinking and purpose enter existing context.



Reinhardt Swart, Associate at SmithGroup, explains the concept further: "Metaphorically, light is used to showcase the premier educational building's presence within the existing architecture on Pennsylvania Avenue.

"Given the street's prominence as the connection between the Capitol and the White House, we had to be very strategic in how we approached the lighting in the urban context to reveal the new tenant and activity, without overpowering. On the exterior, tactical use of exterior accent lighting along the street provides wayfinding; however, the exterior expression relies largely on the interior lighting."

Inside, adjacent to the elegant, renovated façade, the central, open atrium consists of large suspended, stacked, treehouse-like glass classrooms and lounges with a feature wrapping staircase, while Bar 1 houses amenities, lounges, and classrooms.

"Inside the main atrium and Bar 1, lighting is leveraged to enhance the renovation by highlighting new geometrical and material interjections within the existing architecture," Swart continues. "The space has an elevated hospitality feel, while remaining highly functional, flexible, and maintainable."

To fully realise the "Revealing Impression" concept, SmithGroup began with a thorough understanding of the urban context and surrounding brightness through HDR photography. Luminance ratios based on this research informed both the exterior and interior lighting strategies.

"Exterior lighting is modest, so as not to distract from the overall architecture and neighbouring buildings," Swart adds. "The lighting is visually brightest towards the east entrance; cove lighting at the entry as well as stair volume and classroom lighting in the "Link" helps to draw one's eye to the east. Subtle uplighting at the existing upper trellis helps to announce the tenant, while breathing new life into the façade.

"The interior lighting also played a key role in the building's expression from the street. During the day, the new copper metal inlay glazing appears as a solid mass. At night, the glazing becomes transparent and places interior spaces on display. Mock-ups of the glass were used to inform and understand how light reflects and transmits through this substrate."

The 3D complexity of the atrium geometry challenged the design team to develop a maintainable yet unique lighting scheme that illuminates the forms, while being cognisant of surface visibility from all sides.

Swart continues: "Warm CCT linear fixtures are concealed along coves and perimeter wall slots. This way, surface brightnesses provide ambient illumination throughout the atrium while eliminating views into direct light sources from below. Integrated LED handrail fixtures highlight the cascading staircase, while providing for easy maintenance. Finally, custom designed decorative fixtures and select accent layers introduce a human-scale approach and reinforce the sense of hospitality."

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Elsewhere, recessed black louvred downlights provide supplemental illumination, while high-CRI artwork lighting provides focal interest while balancing brightness with general architectural lighting.

The atrium is flanked by two existing skylights that allow daylight to penetrate through all floors. Artificial cove illumination at each floorplate edge creates a volumetric and unique aesthetic, carrying the lighting effect down to the lower levels and distributing light throughout the atrium. By limiting the use of downlights here, the team reduced glare, distraction, and visual clutter within the expansive space.

Swart explains further how the architectural lighting within the atrium serves to complement the abundant natural light that fills the space: "SmithGroup provided daylighting services. Parametric software was used to simulate daylighting performance through both the main façade louvre system, as well as existing skylights.

"In fact, we worked closely with the architecture team to maximise daylighting to the lower levels by studying iterations of floor edge profiles and setbacks, as well as classroom and structural system locations. These studies helped to maximise daylight by tapering each consecutive floor by a few feet, as well as locate classrooms to better distribute natural illumination in the atrium.

"To visually extend the brightness of the skylights lower and deeper into the space, the linear wallslots and coves provide surface illumination at every level. This volumetric approach provides ambient brightness to balance and complement the natural illumination."

While the amount of glass used on the project could have led to issues with glare and reflections, Swart explained that SmithGroup sought to leverage the unique glass selection to elevate the lighting experience. "Our understanding of transparency and the glazing characteristics creates a warm and inviting façade," he adds.

However, the glazing on the interior did prove to be a challenge for both reflection and glare. "The glazing, compounded with the multiple view angles and perspectives one can experience in the atrium, meant that we were meticulous about where and how fixtures were installed. That is why we have limited use of recessed downlights – to prevent view into direct fixtures from below.

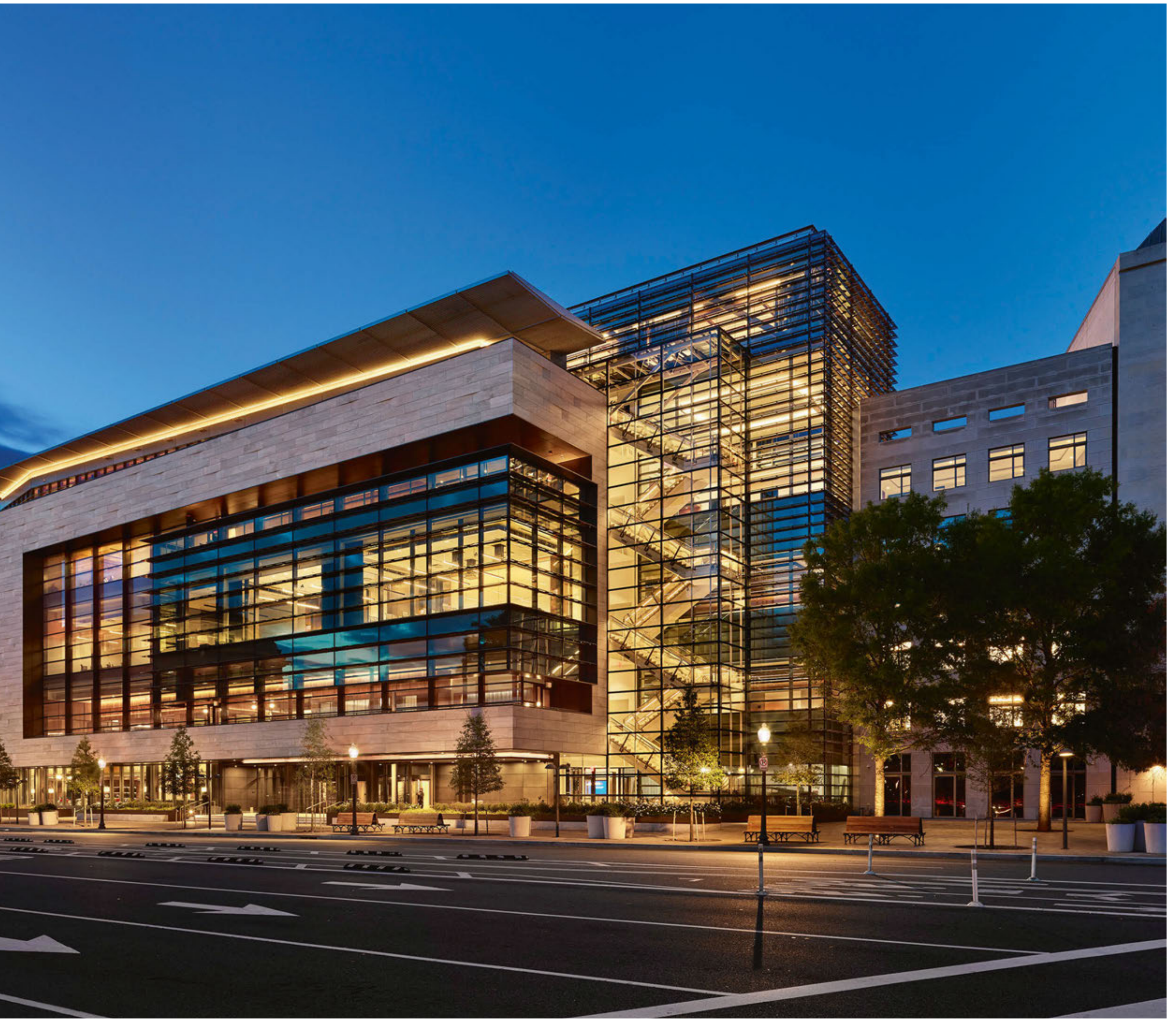
"Additionally, coves are detailed and located so that you cannot see into any architectural pockets from above. Lighting in classrooms was studied from within each room, but also as seen from the atrium through the glass. This creates a cohesive and carefully considered design, free of unwanted reflections and glare."

Alongside the abundant natural light throughout, the Bloomberg Center is characterised by the use of warm wood cladding, both on the ceiling and along the walls. Warm CCT fixtures help to further complement the materiality of these wooden finishes. In the library and other student spaces, low-voltage LED accent lights are built into the casework and detailing to emphasise the craftsmanship of the build. Meanwhile, warm wood surface illumination, integrated shelf lights, detailed column accents, discrete downlights, and decorative light fixtures draw attention from the street into the Bar 1 spaces; adjacent to the glass huddle rooms outfitted with direct and indirect pendants, a field of decorative light fixtures and custom mullion-mounted wall sconces offer intimate quiet zones. SmithGroup worked closely with Rockwell Group to design the decorative fixtures, which elevate and complement the material palette.

In the wood-clad theatre, a layered lighting approach consisting of accent lighting on the feature ceiling, continuous perimeter wall washers, and ceiling integrated track lighting facilitates a unique theatrical design. All house lighting is dimmable to 0.1% and connected to the DMX theatrical control system to provide flexibility.

While the atrium lighting is the major focus of the project, SmithGroup also ensured that the classrooms were state-of-the-art, helping John Hopkins University to advance its learning environments. "In the classrooms, a louvered linear pendant provides functional task lighting, while illuminated solid surfaces accentuate the room's volume. Discrete low-voltage linear LEDs illuminate the luxurious curtains. Underneath the atrium, concealed tiered cove lighting, discrete downlights, and task-based wallwashers visually elevate a one-of-a-kind classroom," Swart adds.

Given the nature of the building, Swart explains how the lighting design also serves to foster a feeling of creativity and productivity: "In Bar 1, daylighting is optimised to provide natural lighting and views, while limiting glare. Accent lighting and decorative fixtures elevate the space and create a feeling of sophistication and uniqueness.



"In the offices, we worked with WSP to provide functional and comfortable office illumination. Often, these spaces did not have exterior glazing, so we were careful to provide indirect and accent illumination where possible, to create a productive work environment."

With so many different spaces, each with their own requirements, Swart explains how the lighting design helps to unify the project and bring a sense of consistency throughout the building.

"SmithGroup provided lighting design direction in all these spaces, so that the programme is harmonious and relevant. We provided a general high-level lighting concept for all these spaces; as design progressed, we detailed and calibrated the lighting for each individual space, but always came back to the big picture – that is, considering how people fluidly move through the building and see many architectural areas in a given day."

However, the project was not without its difficulties. Reflecting on the scope of the lighting design work, Swart explains that there were three major challenges for SmithGroup to overcome.

"First, garnering approval from the Commission of Fine Arts (CFA) from an exterior perspective," he says. "For this, we used high dynamic range (HDR) photography and luminance readings of the existing buildings in the neighbourhood, including the Canadian Embassy, National Gallery of Art, and some of the Federal buildings along the Pennsylvania Avenue walkway. We then built a 3D model for the proposed new lighting and tracked the achieved luminance of different variations to understand the luminance ratios with existing data. Photorealistic and photometrically accurate renderings were merged with the HDR photography through Photoshop to understand balances and verify pseudo colours. These images and data were presented to the CFA for approval, and helped tell a meaningful lighting story."

The second major challenge, Swart explains, was providing illumination in a 100ft tall atrium that was maintainable, yet visually pleasing. The integrated handrail light in the wrapping staircase is easily accessible and provides light directly on the surface where it is needed. At each level, remote drivers were strategically located for maintenance and installed. Because each successive atrium floor is tapered, one can easily access light fixtures in the floor above, while in the main atrium ceiling, light fixtures are located only where maintenance teams can easily get to the fixtures from the upper floor level. Otherwise, theatrical fixtures indirectly uplight the ceiling from the edge of a lower floor plate, which are accessible via the tapered floor below.

Swart continues: "The final challenge was the general scope of the project. It is a large project that required close review of fixtures and layouts for consistency, yet many integrated detailing and accent layers. Many unique mounting conditions created a bespoke lighting solution."

However, for all the challenges faced on this project, it has seen a positive response from the faculty of John Hopkins University since it officially opened in 2023. So much so, the JHUBC Facilities Department has reported that the transformation of the atrium in particular has been very successful, with many students and faculty choosing to work out in the open, collaborative spaces, rather than the offices.

Swart adds that SmithGroup is satisfied with the lighting design, and the way in which it creates a welcoming atmosphere for users of the space. He says: "The lighting solution is elegant and expressive of JHU's mission. Light is integrated to complement the architectural narrative. The design fosters open collaboration and discovery, inviting students and faculty to enjoy the architecture, and the lighting design works harmoniously across multiple spaces, helping to unify the architectural vision."

Indeed, the realised lighting invites users to experience JHU's hospitality, and showcases the architecture as a world-class, premier educational building, "where discovery meets democracy".

www.smithgroup.com

Client: John Hopkins University
Lighting Design: Reinhardt Swart, Amanda Badgero; SmithGroup, USA
Architect: Ennead, USA; SmithGroup, USA
Interior Design: Rockwell Group, USA
Additional Design: WSP, USA
Lighting Specified: Axis Lighting, Erco, i2Systems, Lucifer Lighting, Lumenwerx, Wagner
Photography: Jennifer Hughes; Alan Karchmer / OTTO

AMP

Quay Quarter Tower
Sydney, Australia

A landmark building overlooking Sydney Harbour, Quay Quarter Tower has recently undergone a renovation, led by **Arup**, in which circularity and retrofitting took centre stage.

Quay Quarter Tower is a landmark building in Sydney's Circular Quay, offering new work, retail and social experiences. Setting a new standard for sustainable building design, Arup worked in partnership with AMP Capital on the project since 2011 on all stages of the build, from planning, feasibility and architect selection, through to the design, construction, and completion of the development.

Originally built as the AMP Centre in the 1970s, AMP Capital's vision was to transform the traditional office building into the centrepiece of a thriving cultural precinct, integrating the nearby Quay Quarter Lanes, heritage buildings, and the bustling Sydney foreshore.

Taking a circular economy-minded approach throughout the project, Arup's adaptive, circular retrofit design approach retained 65% of the original building's existing floorplates and structure, and 98% of the original structural walls and core, equating to a saving of approximately 12,000 tonnes of embodied carbon.

Working closely with Danish architect 3XN, it is the first major project designed by a Danish architect in Sydney since Jørn Utzon collaborated with Ove Arup on the Opera House in 1973.

The lighting design for the tower was won by Arup through an international tender, while the interior workplace fitout was also won through a competitive lighting design tender. The scope for the lighting design project included the front of house and client facing areas in the base build, alongside speculative office spaces, the interior workplace fitout for the AMP tenancy floors, retail and hospitality, podium and landscape, and surrounding pedestrian street lighting.

Speaking with arc, Tim Carr, Australasia Regional Lighting Leader at Arup, reveals what the initial design brief for each space within renovation looked like: "The lighting design for the podium interior design was to create a calm and spacious character within the cathedral-like proportions. The design included informal working areas, retail, and client facing meeting rooms. The interior was to reflect the light of the city outside with the use of high-quality materials and bespoke interior finishes and fixtures. The lighting had to reveal the grand form of the interior, without being intimidating. It also had to invite people in to enjoy the common spaces, retail, and hospitality.

"The workplace interior design brief included a flexible working environment, which drew its character from the harbour and surrounding city. The intent was to create distinctly different working environments, employee facilities, and client-facing floors, while taking full advantage of the incredible views over Sydney Harbour."

With this in mind, the lighting design team looked to provide a calm and uniform light across the bright and textured interior surfaces of the tower's lobby spaces, and then punctuate this with human-scale points of interest.

"We wanted to bring the atmosphere of the city into the building, and maintain views out to the street, podium, and large-scale Olafur Eliasson artwork," Carr adds.

The workplace concept was to firstly exaggerate the contrast of moving from the darker lifts out into the generous views of the harbour. Arup sought to create drama and contrast when walking through the lift lobby out into the bright Sydney daylight, or the nighttime view of the city and water.

Carr continues: "Once in the main interiors, we wanted to visually integrate the electric light with the daylight to reduce glare and combine a uniform light across the interiors, accentuate feature walls and furniture finishes. From the offset, the concept included larger back-lit features to draw people to special working areas, stairs, and voids, and the intent was that these would be visible from the harbour. Finally, the concept included more domestic or hospitality-style pendants and table lights in the cafes and informal meeting spaces to create a warm and approachable atmosphere."

Bringing this concept to life, Carr adds that within the lobby, Arup worked with DRS to provide ambient illumination predominantly through indirect light. Layered cove lighting at high levels

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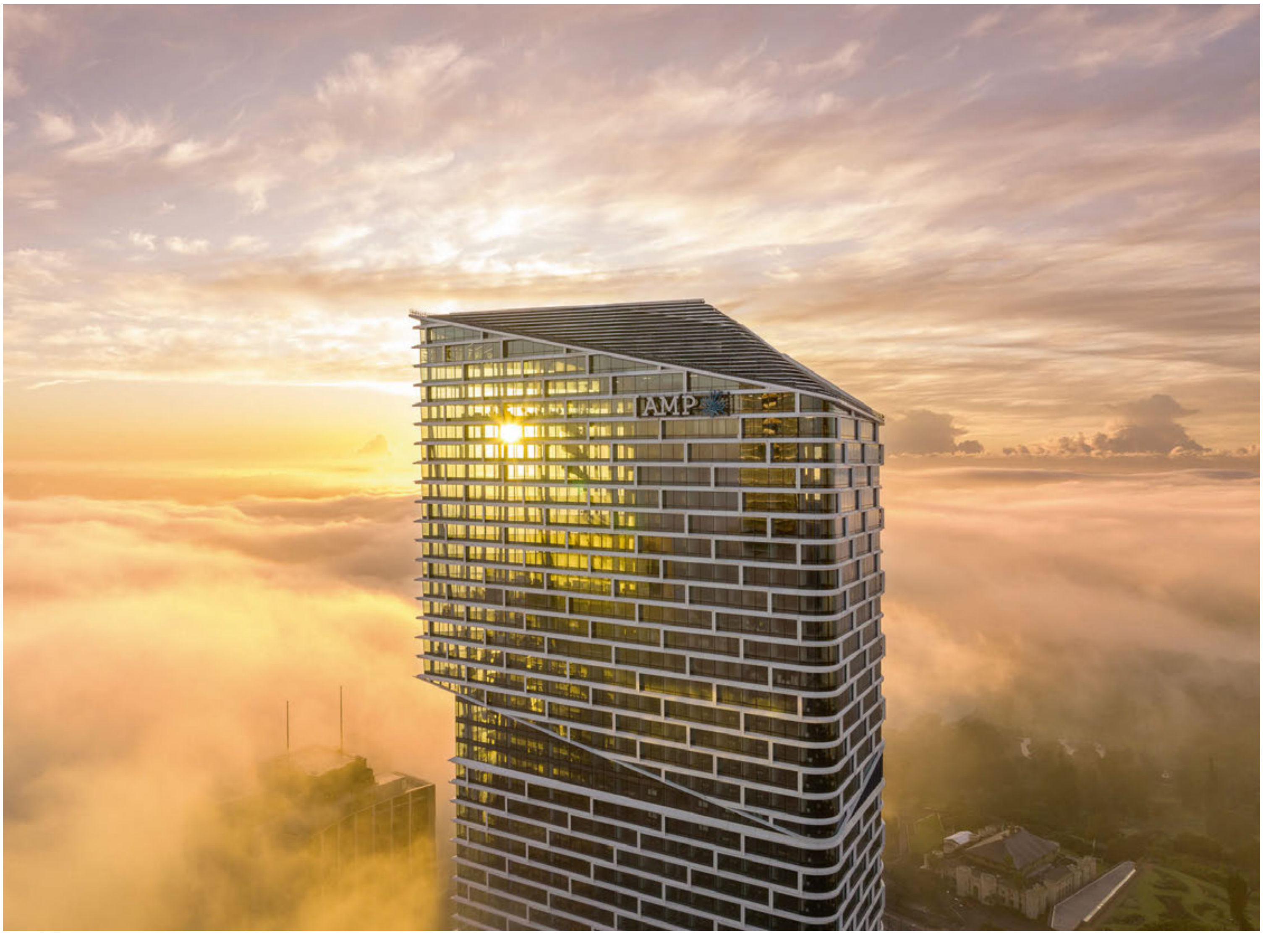

AMP

reflects light off the ceiling, and creates a strong graphic that follows the lines of the curved core walls. The design team therefore avoided the use of downlights in the main lobby spaces to reduce glare and draw attention to the surface finishes. Bespoke large-scale luminaires designed by DRS were hung in the generous voids to provide ambient light and architectural scale decoration, while floor lights illuminated the informal working areas and contributed to the overall compliance of the main thoroughfares. Hidden lighting in the joinery, stairs, and floor detail complete the composition to provide a flattering wash of light onto the high-quality natural finishes.

Within the workplace, the interior finishes transition from dark to light as one moves from the lift lobby out onto the main concierge, break and working areas. The general lighting in the workstation area was provided by a combination of floor-mounted direct-indirect luminaires integrated into the joinery, narrow beam downlights in circulation areas, and wallwashing. The design avoided the need for large luminaires within the ceiling to reduce glare and create a more seamless lit effect between the interior and bright Sydney sky.

Above the main ‘village’ voids, stairs and within meeting hubs, circular back-lit membrane ceilings have been used in sizes up to four metres. These are programmed to reflect the exterior conditions with coloured lighting effects representing dawn, day, sunset, and nighttime. The client also uses these for cultural events and activities within the Sydney calendar, as they are visible from the northern CBD and harbour approaches.

One of the central components of this project was the focus on reuse and refurbishment; this circular design approach informed Arup’s choices for the building’s double deck lift – a move whose inherent carbon savings is the equivalent to nearly 70,000 flights from Sydney to Melbourne. The lift system features two lifts locked together vertically, allowing passengers on adjacent floors to use the elevator simultaneously, saving nine lift shafts compared to a traditional system, and opening up 120sqm of space per floor, giving the building improved floorplate amenity with larger contiguous spaces.

The lighting design throughout Quay Quarter Tower also looked to fit into the circular economy-focused approach by prioritising the reuse of existing materials and structures. Rhiannon West, NSW/ACT Team Lead at Arup Australia, explains what this meant from a specification aspect: “The specification process involved a combination of retrofitting existing elements and sourcing refabricated/restored products. This approach helped to minimise waste and embodied carbon, while achieving the desired design objectives.

“This was the first major project for us with a strong focus on circularity. Since the completion of this project, our approach to sustainable building design, in particular retrofit projects, have a strong focus on circularity as a best practice approach and key principle.”

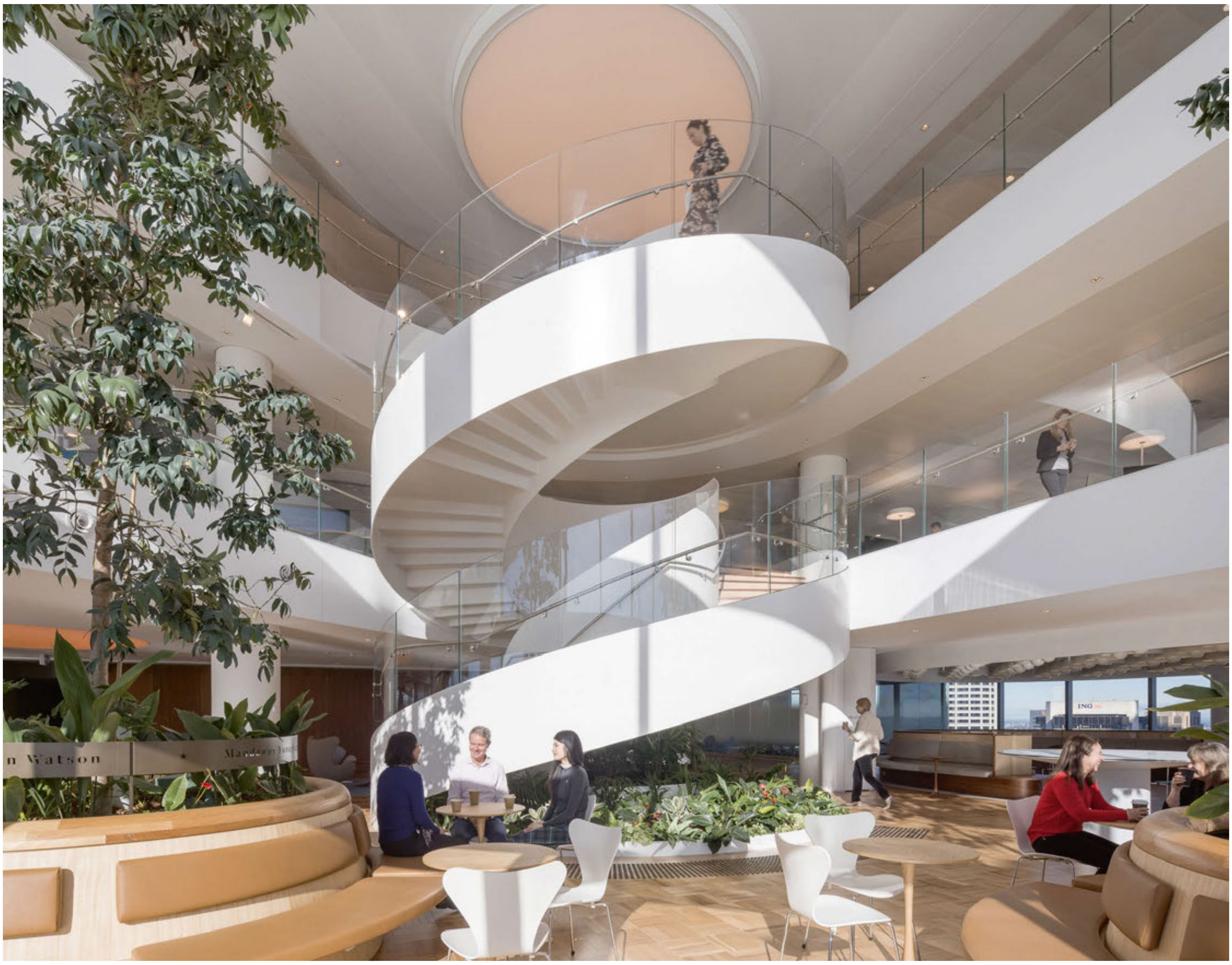
Another element that helps the project to lower its energy use is its intelligent, and unique, façade design, which shades the building for optimised solar protection. With high-performance glazing and sunshades to reduce heat and glare, the façade improves occupants’ thermal comfort, and lowers air conditioning energy consumption.

Using a thermal model of annual radiation, the Arup team designed the exact angle and shape of the sunshades to maximise daylight and occupant comfort. The shading solution folds and tapers to follow the path of the sun. This design complements the building’s open plan concept, filling spaces with natural light, keeping internal blinds open, and revealing magnificent 360° views of Sydney Harbour.

West explains how the lighting design fits in with the wider daylighting strategy of the building: “We collaborated with the design team on the façade shades to maximise daylight within the spaces. This collaboration ensured that the daylighting design was integrated with the overall lighting strategy.

“The artificial lighting was designed to complement and enhance this natural light, creating a balanced and visually appealing environment. This involved careful consideration of light levels, colour temperature, and placement, to ensure harmony between natural and artificial lighting.”

Further to this, the lighting design considered



boosting creativity and productivity in the space, by creating a comfortable and visually stimulating environment. This involved using dynamic lighting solutions that could be adjusted to suit different tasks and activities.

Since completion, Quay Quarter Towers has gained plaudits for its sustainable approach; it has won numerous awards, including a Green Building Council of Australia 6-Star Green Star Office Design v3 accreditation for its novel environmental features, which optimise the existing building's embodied energy and resources. The design also boasts a 5.5 Star NABERS Office Base Building Energy Rating, and WELL Platinum certification.

"Working closely with Danish architects 3XN and local firm BVN, we had a strong focus on detailed integration of the lighting design within the overall architectural vision, resulting in a cohesive and sustainable development," West continues.

"The lighting enhances the user experience by creating a dynamic and visually appealing environment. It complements the wider architectural design by highlighting key features, and creating a comfortable atmosphere. The result closely aligns with the original plans and concepts.

"The feedback from both the client and the users of the space has been overwhelmingly positive. The lighting design has been praised for its sustainability, visual appeal, and contribution to the overall user experience."

www.arup.com

Client: AMP Capital
Lighting Design: Tim Carr, Rhiannon West, Rebecca Cadorin, Scott Gilbert, Rachel Smith; Arup, Australia
Architect: BVN, Australia; Hassell, Australia, 3XN, Denmark
Lighting Specified: Erco, Euroluce, IBL, iGuzzini, KKDC, Modular Lighting, Reggiani, Tom Dixon, We-ef
Photography: Adam Mork

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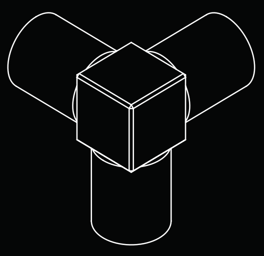
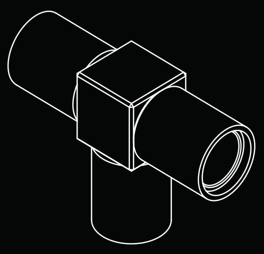
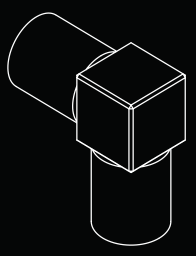
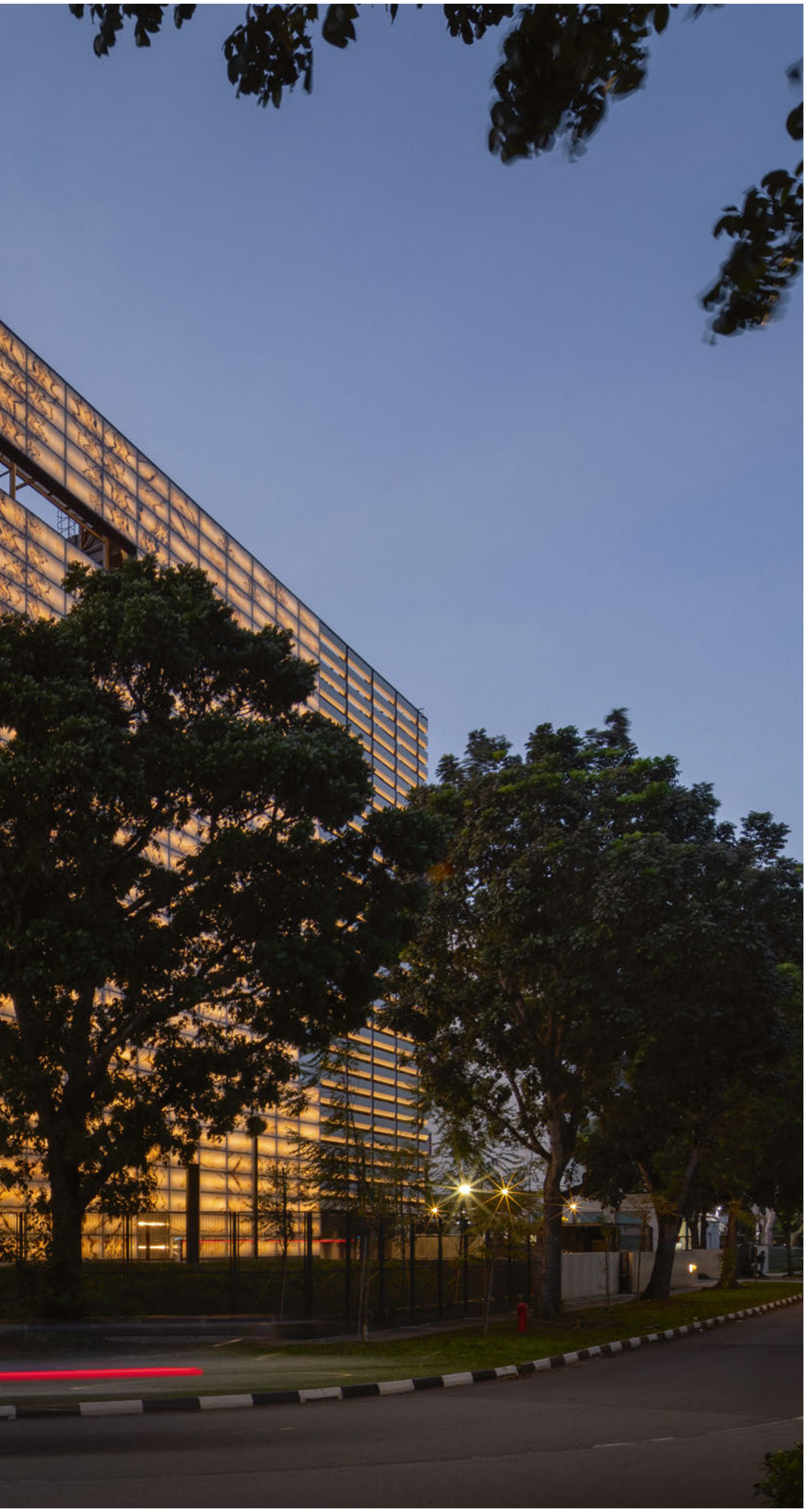






The Reserve



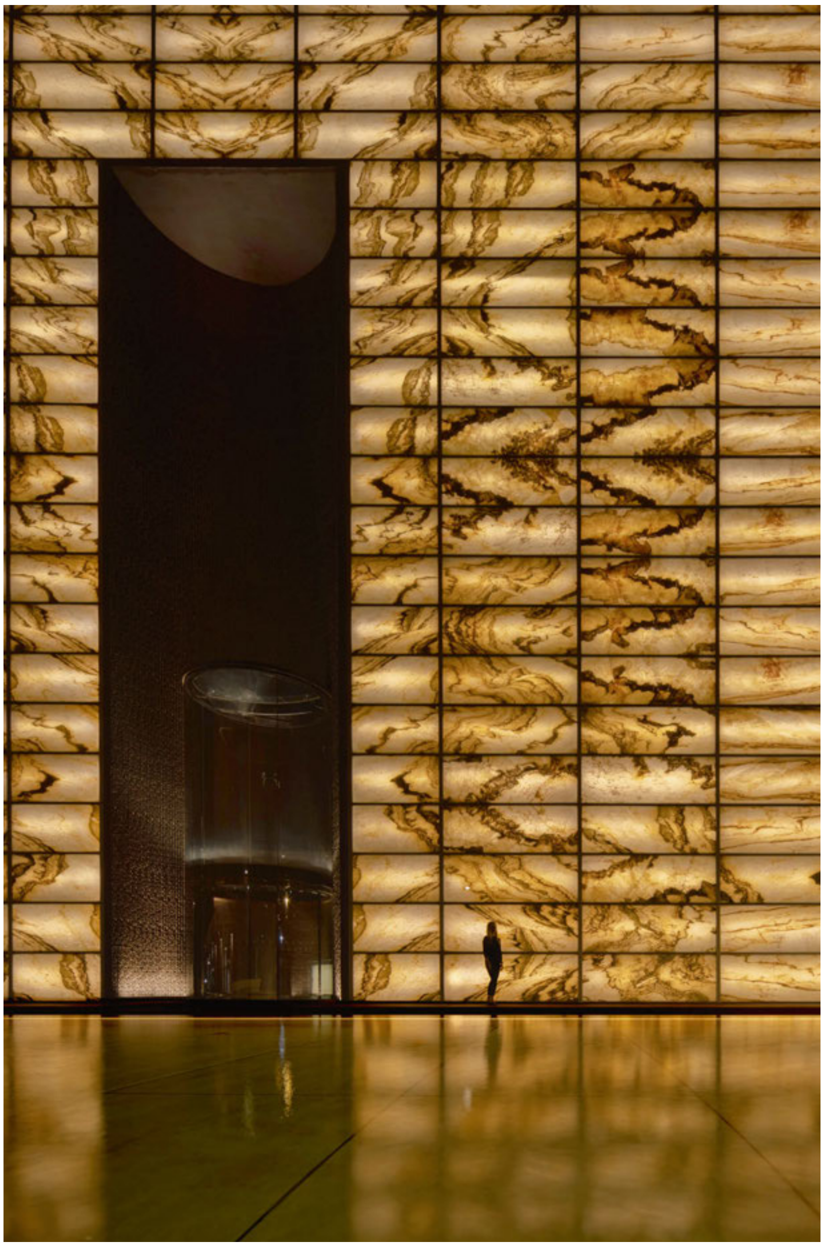
The Reserve
Singapore

[d]arc awards
CELEBRATING A DECADE OF LIGHTING DESIGN
ENTRY

The Reserve, a state-of-the-art asset centre in Singapore, merges cutting-edge security with breathtaking architectural and lighting design from **Light Collab**, transforming a high-capacity vault into a luminous symbol of wealth, innovation, and elegance.

The Reserve is a state-of-the-art asset centre in Singapore that houses a wealth of assets such as gold, silver, art, and more. The building was completed in 2024 for clients Silver Bullion, and can store almost 500 million troy ounces (15,500 metric tonnes) of precious metals, earning it the title of the world's highest storage capacity. The high storage capacity is made possible via the foundations, which allow the vault's floors to withstand up to 45 times more weight than a typical car park structure, allowing silver to be stacked as high as 12-metres tall.

The building itself stands as a glistening black monolith, made of transparent onyx panels envisioned by architects Monolab Studio, whose design is a metaphor for the robust precious metals within and the transparency inherent in the distributed financial technologies of the future. Designed as a play on contrasts to captivate, the onyx-clad fortress radiates a luminous elegance both within and beyond, masterfully harnessing light.



Tasked with designing the lighting for The Reserve was Singapore-based lighting consultant Light Collab, which bravely bid for the chance to work on the project despite never designing for vaults before.

After a successful interview with the client, architect, and interior designer, the team was given the go-ahead to join the board and was briefed on Monolab Studio's vision of a luminous façade. Light Collab saw great potential in the project's wow factor and cinematic value, envisioning the venue as a prime location for films. The space offers so much drama as soon as visitors enter the space, experiencing its cave-like feel, high-tech nature, and mysterious labyrinth of corridors, which create a futuristic look contrasted with a hospitality twist.

Lighting designer, founder, and Principal of Light Collab, Yah Li Toh, explains to arc how the team planned to bring this concept to life: "We built upon the strong architectural foundation set by Monolab Studio, enhancing their material palette and spatial composition with carefully curated lighting.

"The challenge was balancing intricate detailing with large-scale spatial considerations, ensuring that every lighting element, from subtle accents to dramatic washes, worked harmoniously. Our approach involved meticulous planning, extensive prototyping, and seamless integration of lighting within the architectural fabric to bring the cinematic vision to life."

The onyx-clad façade serves as the defining element of this vision, creating a striking contrast between solidity and illumination. By day, the dark, polished exterior exudes a sense of strength and exclusivity, while by night, strategically integrated lighting transforms the surface into a glowing beacon. This design approach not only establishes The Reserve as a landmark, but also reflects a seamless interplay between luxury, modernity, and the natural beauty of its materials.

The façade lighting was one of the greatest challenges that Light Collab had to face, with the architect envisioning the onyx façade to have dual visibility from the outside, and the inside, meaning each onyx panel had no backing. However, behind the façades lies various spaces with numerous functions, such as lobbies, meeting rooms, lounge areas, and a rooftop garden. Ultimately this limited the position of where Light Collab could mount lighting fixtures.

Toh explains: "Due to the nature of the panels and the various spaces situated behind it, we had to conduct studies. This meant testing to understand the interior lighting's spill of light, the blank walls, or how we conceal the lights while making them easy to maintain, all while keeping the power consumption as low as possible."

To achieve the desired effect, Light Collab developed a bespoke solution: customised LED modules with integrated optics, carefully engineered to direct light precisely onto the onyx surface. These modules were seamlessly integrated into the façade frames, ensuring all illumination was focused on the panels, while keeping luminaires concealed from view.

DIMENSION
Ø48mmx80mm(max)

CCT
2700K, 3000K, 4000K

IP RATING
IP40/IP44

POWER
4W/m or 6W/m

LUMEN OUTPUT
305-451lm/m

BEAM ANGLE
13°,20°,28°,36°,44°

LIFETIME
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TRIM COLOUR
Black/White

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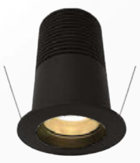
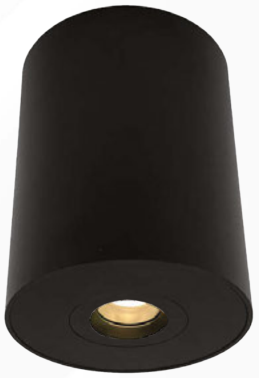
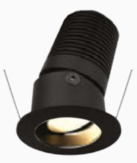


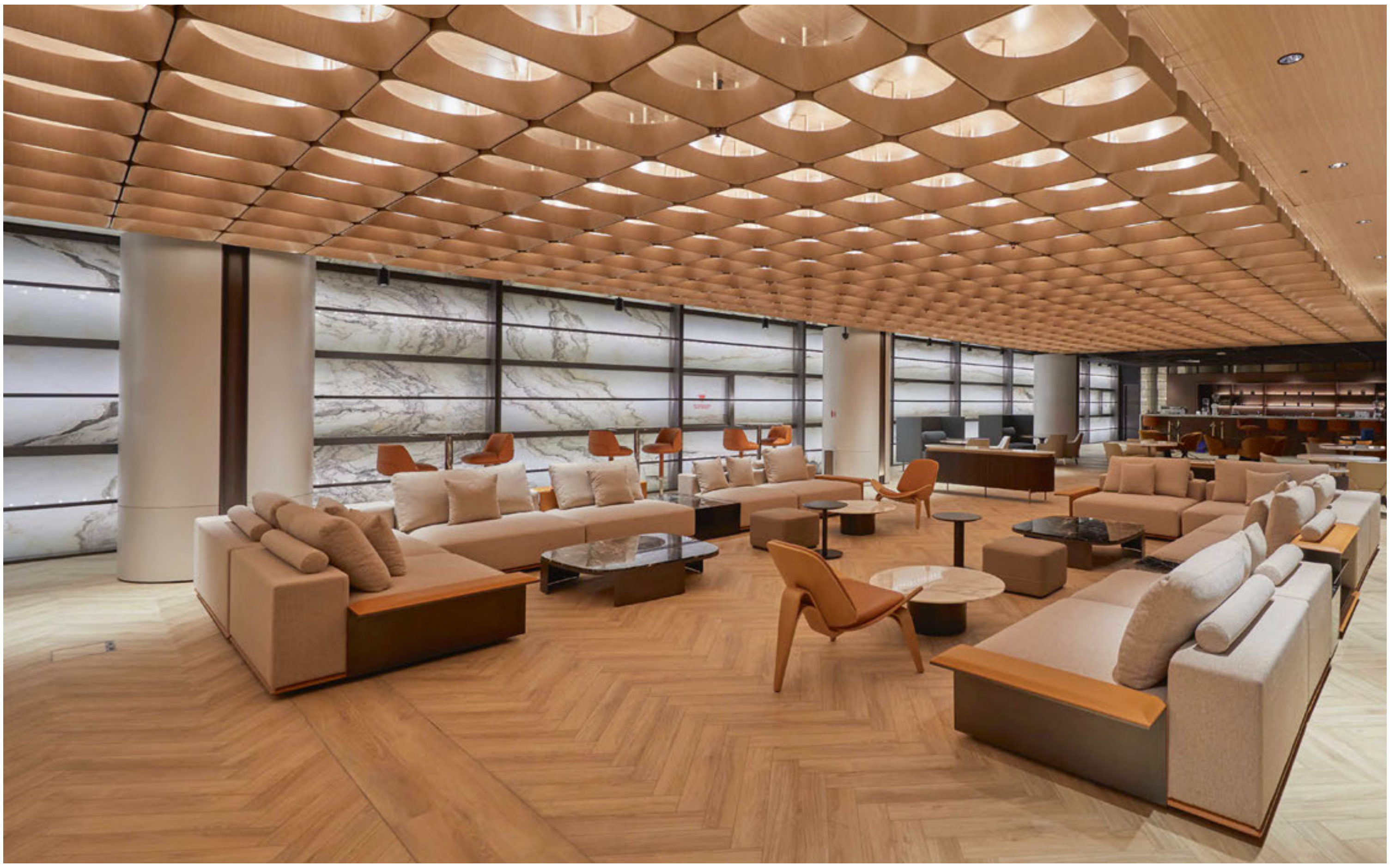
RYNOX



-NEW-
TOWER ROUND RYNOX



RYNOX D



Through extensive testing and iterative mock-ups, the team refined the lighting strategy to balance the aesthetics, functionality, and energy efficiency. Early trials included multiple horizontal LED bars per onyx panel, however, the design was gradually optimised to require just a single horizontal LED bar per panel – significantly reducing energy consumption while maintaining a striking visual impact. The reflective nature of the onyx presented a second challenge, which was addressed with customised capping to refine reflections, resulting in a shimmering, jewel-like effect rather than unwanted glare. This meticulous approach allowed The Reserve to transform at dusk, evolving into a radiant illuminated structure – an architectural statement that alludes to the wealth and security housed within.

A key highlight within the building is its 30-metre-tall Silver Vault, where glistening stacked silver is stored on towering 16-metre shelves. The challenge was twofold: creating an immersive, dramatic experience for visitors while ensuring the vault remained fully functional for daily operations and security protocols.

“The racks inside the Silver Vault had a skeletal and industrial look, therefore we decided they needed to be improved by dressing them up with the right lighting. We decided to illuminate the racks vertically and given the narrow space between the aisles, we also needed to consider the mounting options, therefore luminaires were mounted on top of the racks,” comments Toh.

By strategically mounting the luminaires at the top, the towering racks created a vertical wash of light that accentuated the shimmering silver. The result is a breathtaking play of light and reflection, which transforms the vault into a striking symbol of wealth and security that is visible both from the ground floor and the dramatic vantage point of The Silver Cliff, a suspended, glass-floored viewing room on level five. The suspended meeting pod offers an unparalleled perspective on The Reserve’s wealth-protection concept.

Here, the lighting had to complement the sense of grandeur that the vault offers while maintaining an unobtrusive presence. Soft and indirect lighting enhances the sleek, futuristic design of the pod, ensuring that the focus remains on the dramatic view of vast amounts of silver below.

Toh adds: “The team was used to 6000K colour temperature in the vaults previously and thus, it is quite a feat to have warmer colour temperature instead.”

While The Reserve is a high-security facility, it also offers office and lounge spaces, designed to evoke luxurious hospitality. The intention behind this section of the design was to create the right balance between warm and welcoming ambience, and functionality, which could promote ease and productivity among its employees. Carefully integrated layers of lighting, including cove lighting, warm downlights, and subtle accent fixtures, create a refined yet comfortable environment.

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Toh adds: "Designing lighting for a workspace that also evokes a hospitality feel can be challenging. The challenge of such spaces primarily will be the client's and user expectations, as most of the time, the finishes used will be darker and contrasting to create the mood. However, people still expect the space to be bright. The layers of lighting are still similar, a balance of indirect and direct lighting, with careful integration."

The onyx façade also plays a dynamic role in the interior lighting experience. By day, sunlight filters through the onyx panels, casting a soft yet diffused glow into the space within. This effect, while stunning, also presented its challenges.

"The onyx façade is quite translucent, allowing natural light to filter into the interior when it is sunny. This daylight can be intense, creating a strong contrast between the illuminated façade and the darker interior, where objects appear in silhouette. We were somewhat surprised by the extent of daylight penetration, but rather than trying to compete with it, we embraced its effect as part of the overall lighting design."

The result creates an interesting perspective on the shift of light from day to night, where lighting ultimately creates an inverse effect, where the light is darker during the day and brighter in the evening. During the day, natural light filtered through the onyx façades casts a dark cave-like effect, while at night, artificial lighting transforms and radiates spaces into luminous environments.

The Reserve stands as a remarkable example of how architectural lighting can truly redefine a structure's status, and the fusion between architecture, technology, and light stands as a testament to collaboration between design fields.

Light Collab's meticulous approach to illumination ensured every element, from the onyx façade to the silver vault, was both visually striking and functional.

Embracing the interplay of natural and artificial light, Toh and her team established the building's identity within. Its unique transition from day to night lighting establishes The Reserve apart from other workplaces as a grand and luxurious place however, its hospitality and warmth refuse to alienate its inhabitants. Ultimately, The Reserve is more than just a security unit and workplace, it is a bold architectural statement that balances grandeur with usability for its visitors and employees, thanks to its thoughtful lighting scheme. Through light, the building tells a story of contrast, transformation, and timeless design, cementing its place as a landmark in Singapore's skyline.

www.lightcollab.com

Lighting Design: Yah Li Toh; Light Collab, Singapore
Interior Design: Monolab Studio, Singapore
Architect: Freight Architects, Singapore; Monolab Studio, Singapore
Lighting specified: : Aristo, Erco, Colorsled, Light Plus Tech, Luci, Luxconex
Photography: Finbarr Fallon; ND Photography

City of London Office
London, UK

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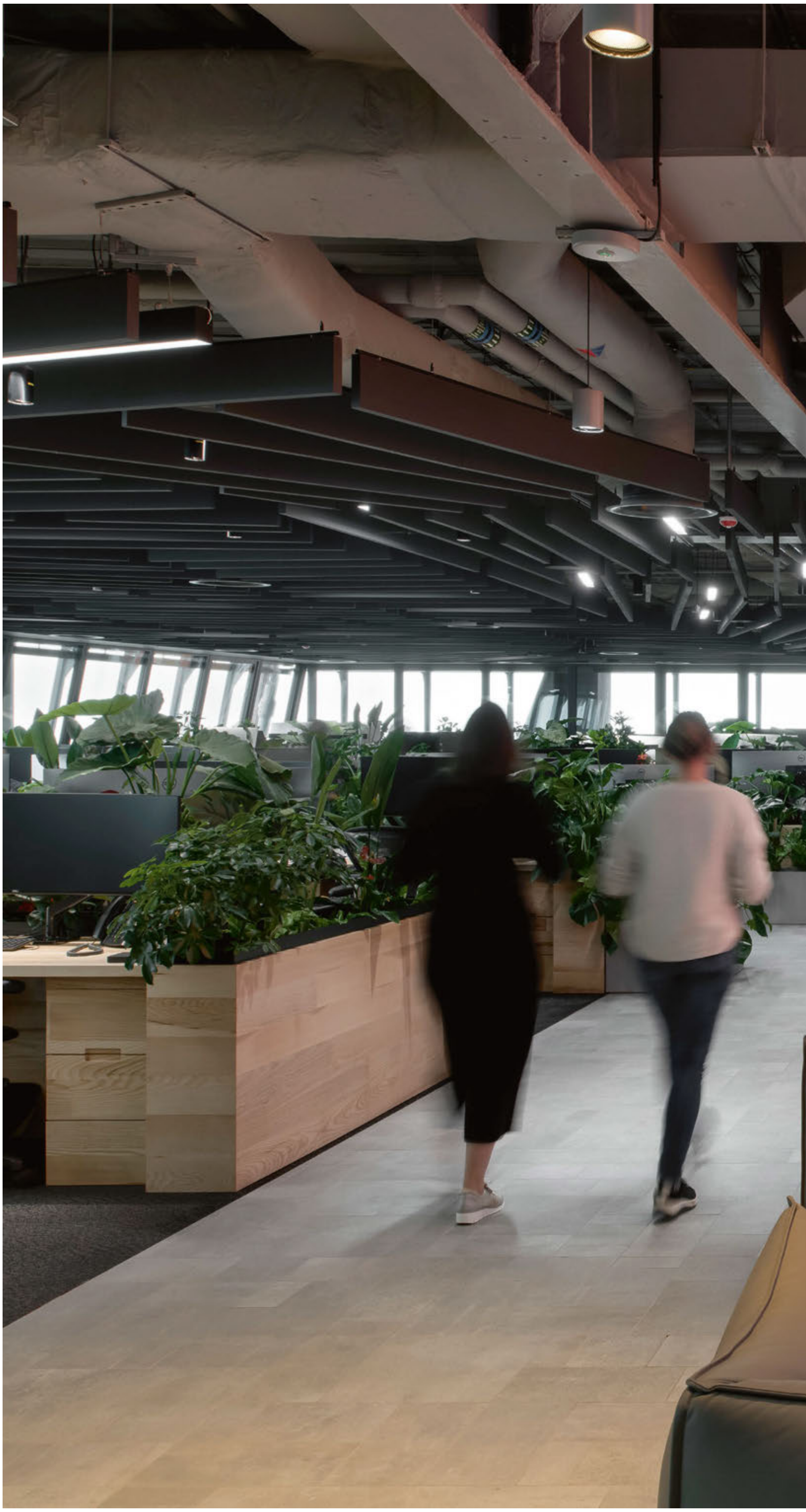
CELEBRATING A DECADE OF LIGHTING DESIGN
ENTRY



Inspired by a stroll in the park, **WSP** sought to create a lighting design scheme that would enhance the “biophilic haven” of this City of London office, harmoniously integrating natural and artificial elements to enhance the wellness and biophilic ethos of the workspace.

As we see the continuous push in workspace design towards bringing the outside in and creating harmonious yet vibrant environments in which to work, a new office space has opened in the City of London that aims to do just this.

Drawing inspiration from the tranquillity of a park stroll, this transformative project spans more than 32,000sqft across four floors, creating a workspace that seamlessly blends nature with the vibrant cityscape. A "biophilic haven", the space has been purposefully crafted to redefine productivity, wellness, and creativity through dynamic, human-centric, and sustainable design.

At the heart of the project lies a lighting scheme, designed by WSP, that seeks to harmoniously integrate natural and artificial elements to enhance the workspace's biophilic ethos. Flexible spaces include meeting rooms, a vibrant club, a central atrium connecting all levels, and bespoke lounge kitchens dedicated to fostering collaboration and relaxation.

Research has shown that biophilic design in office environments can enhance productivity by 6%, and creativity by up to 15%, while also fostering a comfortable and invigorating workspace.

To align with this vision, the lighting scheme needed to serve dual purposes: provide feature lighting to elevate the aesthetic appeal, and ensure adequate growing light to protect and nurture plant life.

To that end, WSP took cues from natural rhythms, the lighting design utilises tuneable light sources that transition between warm white (2700K) and cool daylight (5000K) throughout the day on all floors. This dynamic cycle supports circadian rhythms and strengthens the connection to nature year-round. Green walls, mid-height planting and a symbolic tree representing growth and progress are accentuated with bespoke accent lighting, fostering a tranquil and inspiring atmosphere. Calming hues and precise lighting placements also ensure inclusivity by catering to neurodivergent needs, enhancing both visual comfort and the overall ambience.

Sacha Abizadeh, Growth Director, Lighting and Energy Solutions at WSP, tells arc about the project's beginnings, and of the collaboration between the lighting design team and Penson Architects: "When we presented our vision and strategy, it aligned closely with the client's aspirations and the architect's creative direction. We structured our proposal around four key pillars: technology, environment, wellbeing, and flexibility, ensuring that our vision complemented the project's biophilic and immersive objectives.

"The initial brief from Penson Architects and the client outlined a biophilic workspace that prioritised wellbeing, immersive lighting, and natural materials. Our role was to enhance these elements with a functional, adaptable lighting scheme. A key focus was ensuring the lighting supported both human wellness and plant growth, while integrating seamlessly with the architecture.

"Our concept therefore blended nature and technology through biophilic design and immersive lighting. We aimed to enhance comfort, support circadian rhythms, and create dynamic environments. The goal was an intuitive, responsive lighting system that adapted throughout the day, optimising both visual and psychological wellbeing."

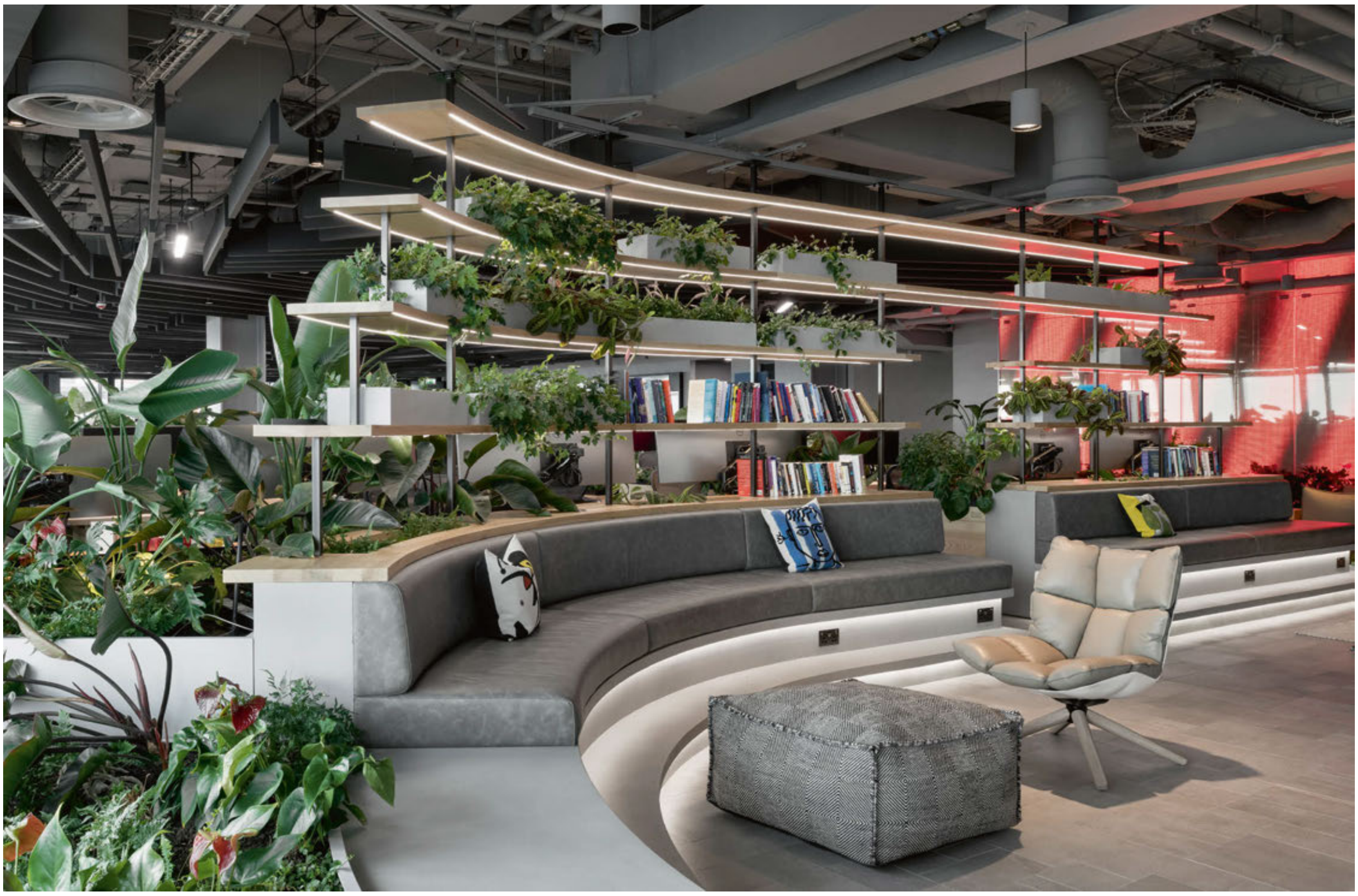
WSP collaborated with the architects and project engineers to ensure that the lighting would complement natural materials, plant life and architectural forms.

Alongside the tunable white lighting, key elements included dynamic lighting controls, immersive RGB pixel tape, and LED walls. Low-level landscape lighting reinforced the outdoor feel, while lighting terrariums and pollinariums addressed areas with insufficient natural light, blending technology with nature.

The atrium, the centrepiece of connectivity across the floors, features a 150-metre timber pendant that cascades elegantly, drawing daylight into the space and creating a visual spectacle that reinforces the biophilic theme.

Throughout the office floors, lighting was meticulously designed to provide a balanced, comfortable environment; a lower ambient light level of 300lx creates a subtle black backdrop, reducing distractions and glare, while each desk is equipped with individually enhanced task lighting.

PLEASE PUT BACK
THE WEIGHTS AND
WIPE DOWN EQUIPMENT
AFTER USE



These fixtures are fully adjustable and wirelessly controlled, allowing occupants to customise their lighting to suit their needs.

This approach prioritises user autonomy while integrating energy-efficient features like occupancy sensors and photocells that automatically adjust lighting intensity based on real-time usage. The wireless lighting control system empowers users to personalise their environments, ensuring both comfort and sustainability.

The office lighting further enhances the biophilic ethos, combining functionality and aesthetic appeal. Linear ceiling fixtures provide even and glare-free illumination, complementing the natural light from large windows and the vibrant green surroundings. Subtle accent lighting highlights the lush greenery and a digital wall feature, which brings a dynamic visual element that fosters a calming, productive, and visually engaging atmosphere.

Neurodiversity was also a core consideration here. As such, WSP incorporated dimmable task lighting for sensory sensitivity, tunable while lighting for circadian support, and flicker-free LEDs to prevent overstimulation.

The lighting design on the fitness floor further enhances the project's commitment to wellness and biophilic design. A continuous, curved linear lighting system is integrated into the ceiling, providing clean, modern illumination that evenly lights the space. The warm white tones create a welcoming and energising atmosphere, while strategically positioned fixtures highlight exercise zones and storage spaces, ensuring visibility and functionality that reinforces the focus on wellness.

While the team at WSP already had experience in biophilic lighting design for both workspaces and hospitality projects, Abizadeh explains that in this instance, research was fundamental.

"We collaborated with horticulturists to understand plant lighting needs, referenced IES guidelines, and consulted with WSP's US colleagues, that were involved in the Amazon Spheres project," he says. "The UCL research paper, Optimum LED Lighting for Green Walls, was particularly influential. Workshops with plant growth and biophilic design specialists helped refine our approach, ensuring both plant life and employees benefitted from a well-balanced lighting environment."

However, despite this previous experience, one of the biggest challenges in the project was integrating grow lights for the abundant plant life, without disrupting the wider aesthetics of the project. Abizadeh continues: "We used hidden grow lights with carefully calibrated spectrums to support plant health while maintaining visual harmony. In areas with limited natural light, lighted terrariums and pollinariums created nature-inspired focal points."

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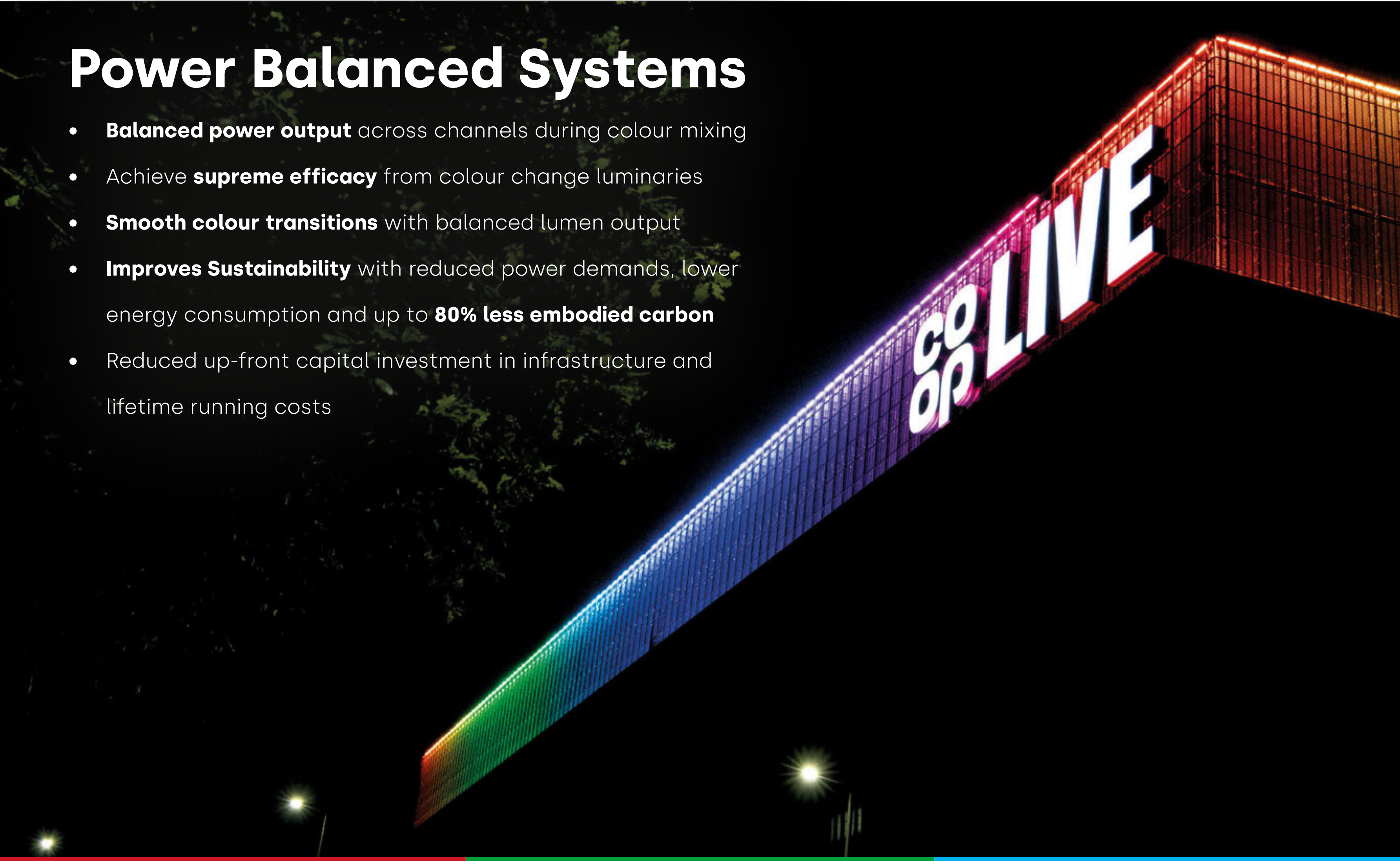

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In the lounge kitchens, stretched fabric lighting offers soft, even illumination, while integrated joinery lighting highlights bespoke cabinetry, creating inviting and functional communal spaces.

Boardrooms feature precision lighting that ensures optimal conditions for meetings, presentations, and brainstorming sessions, with adaptable settings and refined design enhancing both functionality and elegance. Themed spaces, such as a games room, relaxed lounge, and music room, use lighting to create immersive experiences that reinforce their unique identities.

Elsewhere, a multi-functional event space seamlessly transforms into a large venue by unifying adjacent rooms. Advanced lighting integrates with AV systems, including video screens and LED walls, to deliver vibrant and immersive experiences for corporate events, presentations, or social gatherings. Immersive lighting features, such as addressable RGB pixel tape and real-time visualisations, adapt effortlessly to mood, activity, or time of day.

With so many different spaces, each with their own distinct style and aesthetic, the lighting needed to suit, as Abizadeh continues: “Each area has a distinct lighting identity. Open workspaces use tunable white lighting to support circadian rhythms, while meeting rooms feature adaptive lighting for customisable ambience. Collaboration zones incorporate feature lighting to enhance interaction, and entertainment spaces use dynamic RGB elements.

“While we’ve worked on multi-functional workspaces before, this project stands out for its integration of immersive lighting, biophilic design, and workplace adaptability. Unique elements, such as club-style lighting, the dynamic gym lighting, and curated terrarium spaces, made it particularly diverse.”

With its WELL-certified lighting strategy that minimises glare, enhances visual comfort, and supports overall wellness, while adhering to environmental standards, this project is a wonderful demonstration of how lighting design can seamlessly integrate biophilic principles, sustainability, and cutting-edge technology.

The dynamic lighting scheme enhances the architectural vision of the space, fostering creativity, collaboration, and wellbeing. Since completion, one occupant has remarked that “the lighting creates a natural and energising environment, making it a pleasure to work here every day”.

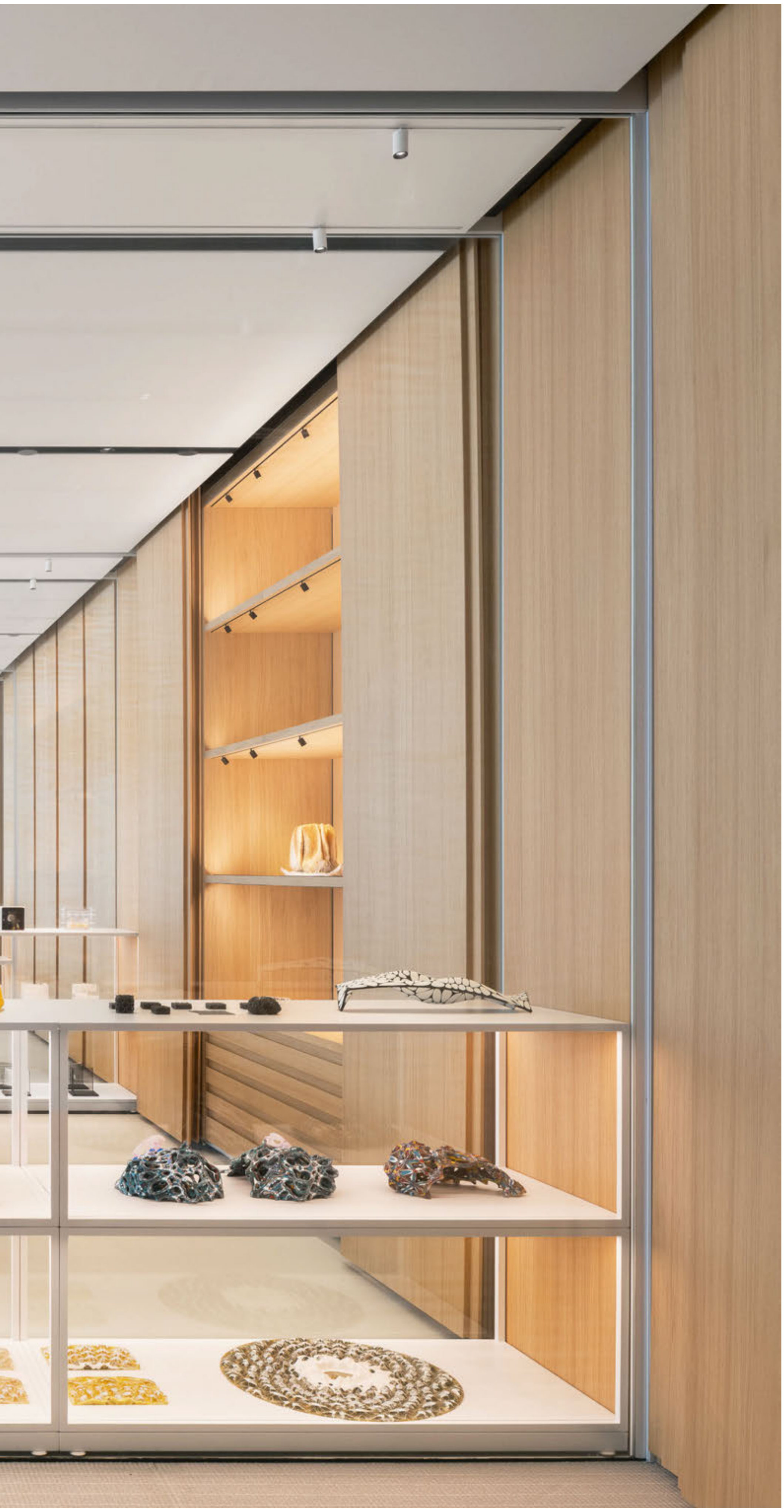
Looking back on the project, Abizadeh says: “The final scheme successfully bridges technology, nature, and user experience. It goes beyond functional lighting, offering immersive experiences and wellness benefits while enhancing the architectural narrative.

“Feedback has been overwhelmingly positive. The client noted increased employee satisfaction and engagement, the architect praised the seamless lighting integration, and users appreciate the personalised controls and enhanced workplace comfort.”

By combining functional and immersive spaces – from bespoke kitchens and boardrooms to themed feature rooms, an adaptable event venue, a striking atrium, an innovative fitness floor, and a thoughtfully lit office environment – this project demonstrates the transformative power of lighting in creating inclusive, enjoyable, and awe-inspiring workspaces.

www.wsp.com

Client: Confidential
Lighting Design: Sacha Abizadeh, Armando Villasenor; WSP, UK; Johannes Kraemer; AVLIN, Germany
Architect: Penson Architects, UK
Building Services: WSP, UK
Lighting Specified: Delta Light, Erco, Fabricate, Flos, LightGraphix, Lucent, Lutron, MID Lighting, Philip Payne, Stoane Lighting, Tryka, XAL
Photography: Fabricate; Tom Bird; WSP



Oxman Studio

New York, USA

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CELEBRATING A DECADE OF LIGHTING DESIGN
ENTRY

With an approach that fuses design and science, Neri Oxman needed a lighting scheme that would fuse functionality and aesthetics for her New York studio. **Tillotson Design Associates** was on hand to craft a harmonious, tunable scheme for the space.

Designer and former professor Neri Oxman has become renowned for the way in which she combines design, biology, computing, and material engineering – coining the phrase "material ecology" to define her work. Through her eponymous studio, she aims to "advance the unification of top-down design engineering with bottom-up biological growth towards the mutual empowerment of nature and humanity".

This combination of design and science forms the basis of Oxman Studio's new, two-storey office and research space in New York, USA. Designed by Foster + Partners, the 36,000sqft facility looks to enhance and complement Oxman's interdisciplinary ethos and commitment to designing with, by, and for nature.

The lab features a state-of-the-art workshop – one of the most advanced digital fabrication facilities in New York City – including a prototyping and robotics shop that enables experimental work with large-scale collaborative robots, and a wet lab that meets Biosafety Level 2 standards, including four customised data-driven grow rooms. The design and innovation laboratory also includes an architectural studio, private meeting spaces, a library, an exhibition gallery, an open kitchen, a garden terrace, and a nursery.

The first-floor level of the new studio acts as a catalyst for conversation and collaboration, with a natural material palette that reinforces a sense of wellbeing. A welcoming library space also functions as the reception area, featuring built-in shelving and a large table for private study or group discussions.

An open plan workspace has soaring vaulted ceilings, and is fully glazed on one side to provide spectacular views of the studio's landscaped terrace and the city beyond, while filling the space with ample natural light. A central atrium connects the two levels, further helping to fill the space with natural light, and provides a 30ft space for rigging and building large-scale projects.

The second level is centred around design and research processes, with a range of wet labs, robotic labs, and prototyping spaces. Facing onto the main lab, four glass-fronted and data-powered grow rooms, known as 'capsules' are climatically controlled to optimise growth – a space where biology and technology, nature and culture, come together.

Complementing Foster + Partners' architectural design, Tillotson Design Associates crafted a lighting scheme that would promote tranquillity, while supporting the space's diverse and creative functions.

A significant client of Tillotson Design Associates, Oxman was keen to work with the lighting designers once more on this project, while Foster + Partners also had a longstanding collaborative relationship in place too. Once in place, Tillotson Design Associates were given a design direction for the overall architectural concept, and from there, proposed tailored lighting strategies that would harmonise seamlessly with the architectural spaces.

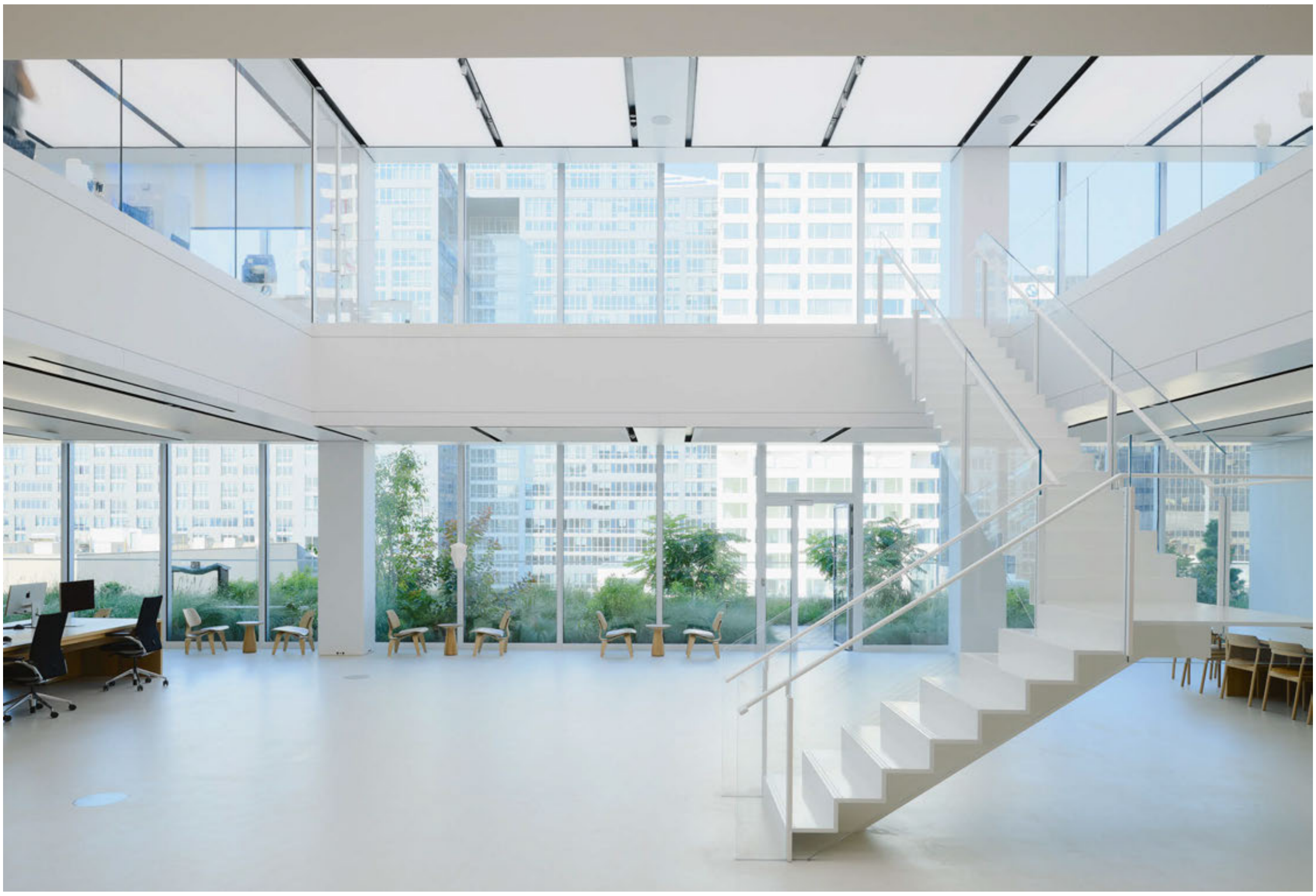
Liyi Pan, Senior Associate at Tillotson Design Associates, explains further: "The concept was a seamless blend of functionality and aesthetics, which have been designed to enhance the studio's experimental and design-driven environment. Nature had been a key inspiration for Oxman, making it essential to preserve views of the outside and ensuring a smooth interplay between natural and artificial light.

"We were also aiming to create a workspace that embraces minimalism, while allowing for moments of visual magic. We wanted to use light to celebrate the spaces, without making light an object."

Facilitating the desired interplay between natural and artificial light, the lighting design called for tunable white LED fixtures that would mimic north-facing light, while creating a smooth visual shift between indoor and outdoor environments. Daylight and occupancy sensors also help to balance the light levels and energy usage, ensuring compliance with NYCECC 2020.

"We designed a luminous ceiling for the upstairs lab, and an indirectly lit barrel-vault ceiling for the downstairs open office to create a balanced visual transition from the indoor spaces to the outdoor sky," Pan continues. "By using tunable white lighting, we were able to seamlessly follow the natural shift in colour temperature from day to night. We have also ensured both floors remained visually cohesive, while still serving their distinct functions by precise programming.

"In areas with special architectural features, like the vaulted ceiling, we highlighted them in a unique way to elevate the sense of geometry. For spaces that have showcased objects, we incorporated small-scale track fixtures to ensure the objects take centre stage and truly shine."



The long bands of shallow barrel vaults in the open office are emphasised through uplighting, serving as a focal point on the lower level. However, Pan adds that getting this right proved to be one of the biggest challenges of the project.

"We went through numerous mock-ups with the manufacturer, making countless modifications and running extensive tests," she says.

"Long story short, we aimed to create a magical effect, where the barrel vault would be brightest at its centre, and gradually fade into darkness at the edges.

"The challenge was that we had less than an inch of shelf space to house a linear fixture that needed to be tunable, individually addressable, and include optics. To achieve this, we worked closely with the manufacturer to develop the right optic, custom housing, and lens. We experimented with different shieldings, removing some along the way. In the end, the overall effect was balanced, elegant, and true to the spirit of the design."

In enclosed offices, integrated mini track lighting illuminates objects within wood cabinetry, offering low-glare ambient lighting. This lighting is activated and deactivated by vacancy sensors, and cabinet lighting operates with jamb switches to conserve energy further when doors are closed. Between offices, small track heads with snoots minimise harsh reflections while highlighting artwork in transparent volumes, subtly defining boundaries while maintaining a continuous visual flow.

On the upper level, the luminous ceiling provides bright, even illumination for robotic and laboratory areas, with output adjusted to meet LPD requirements. Ultra-high transmission perforated membranes with foam backing are incorporated to meet acoustic goals in the machinery room. The evenly lit walls and floors are used to display prototypes and models.

In enclosed, controlled-environment rooms, modified linear lighting is designed to withstand extreme humidity and temperature, and serves as an invisible layer for specialised environments requiring grow lighting.

Regarding the luminous ceiling feature, Pan adds: "Many specialists were involved in this project, including an acoustic consultant, with whom we collaborated on this aspect. We needed to meet a 0.95 NRC rating and worked diligently to find and coordinate with manufacturers to ensure our final product achieved this requirement."

Among the tunable white elements, a few static white fixtures are strategically selected to save costs, while enhancing materials and defining the functions of enclosed spaces – 3000K creates warmth and intimacy in private offices, while 4000K fosters an energised, focused atmosphere in those controlled-environment rooms.

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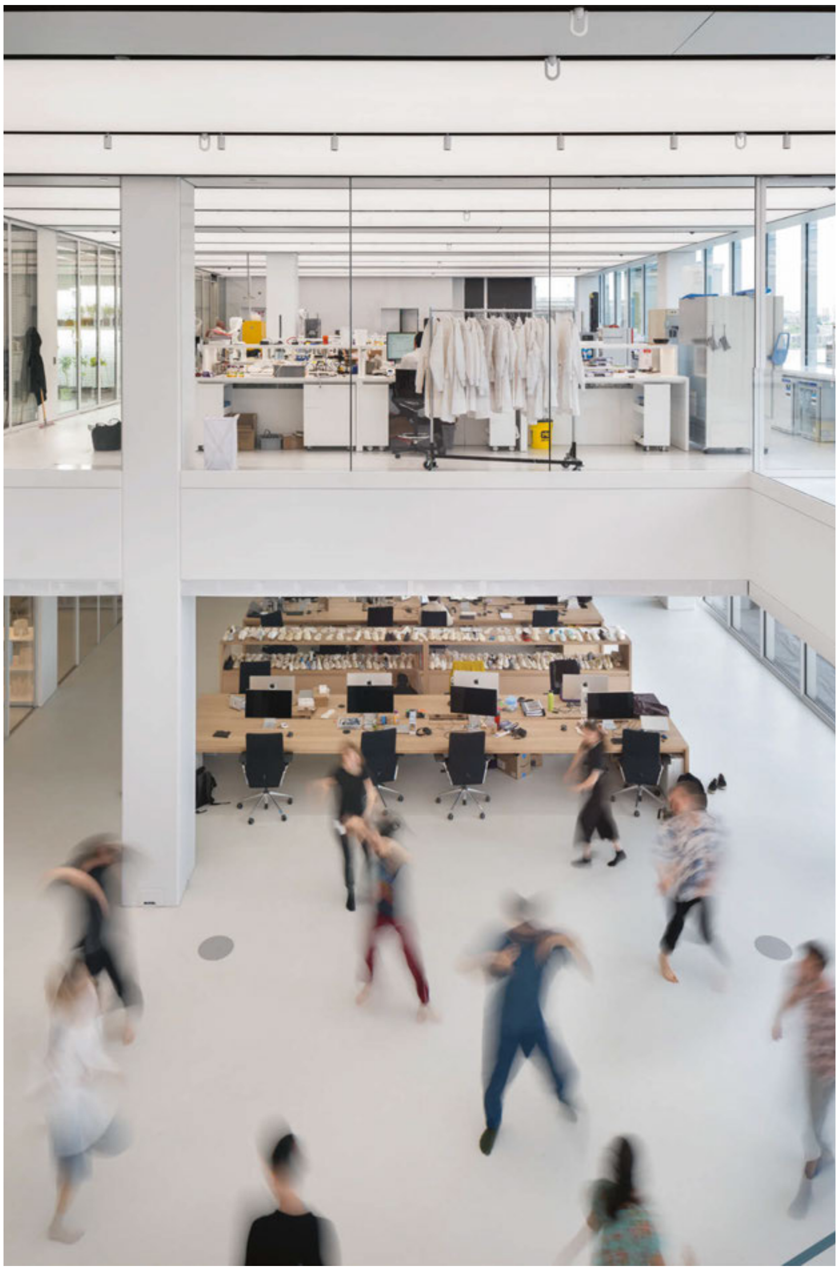

In the open area with tunable white fixtures, precise DMX values are programmed into the control system to ensure visual and mathematical harmony between the indirectly lit ceiling below and the direct, luminous ceiling above, maintaining consistency across both floors.

Pan adds that, with such abundant daylight in the space, and the need to coordinate the artificial lighting accordingly, multiple site visits were needed to effectively fine-tune the light levels and colour temperatures.

"Because the combined CCT in the space could be influenced by multiple factors, such as sun angle, reflections from buildings across the street, and sky conditions (e.g. overcast skies), we conducted site visits on multiple days and at different times throughout the day. We measured the combined CCT without any artificial light at the perimeter near the glazing. After collecting this natural light data, we tested and measured the CCT of the artificial lighting in combination with final architectural finishes to ensure that it matched the natural CCT throughout the day.

"The ceiling lights in the open office and lab areas are individually addressable every four inches. When abundant daylight is present, the lighting can be dimmed smoothly, transitioning from 0% output near the windows to 100% output further indoors."

With a diverse collection of spaces, each with their own individual needs – from the laboratory spaces to the meeting rooms, workspaces and library area, Pan explains how the lighting design helps to showcase each of these spaces, while creating a feeling of consistency across the space.

"The lighting strategies are designed to complement the function of each space. In the labs and machine rooms, luminous panels provide even, shadow-free illumination, while the offices feature glare-free track lighting that highlights the studio's artworks and prototypes. Transparent glass partitions weave the spaces together, allowing each area's unique features to stand out while maintaining overall harmony.

"The architectural language flows consistently throughout the project, with lighting serving as an enhancer rather than a standalone element. The two levels are connected through illuminated ceilings with programmed CCT and carefully balanced brightness, ensuring a cohesive visual experience."

On the variety of spaces across this project, and the challenge that this brought, Pan adds: "We've always worked on projects with diverse functions, but none with this exact combination. Oxman's work brought a unique set of challenges, especially with the highly specific requirements for the lab spaces.

"Given Neri's meticulous attention to detail and strong design vision, we felt an even greater responsibility to deliver our best work. I have to say, we had an incredible team from design to construction, and we learned, collaborated, and overcame challenges together."

Alongside the vaulted ceilings in the open workspace, other challenges included adhering to the NYCECC 2020 lighting power code, while creating an open office environment that was illuminated primarily through indirect lighting. Throughout the process though, the strength of collaboration from all parties meant that there was no challenge that the team could not overcome.

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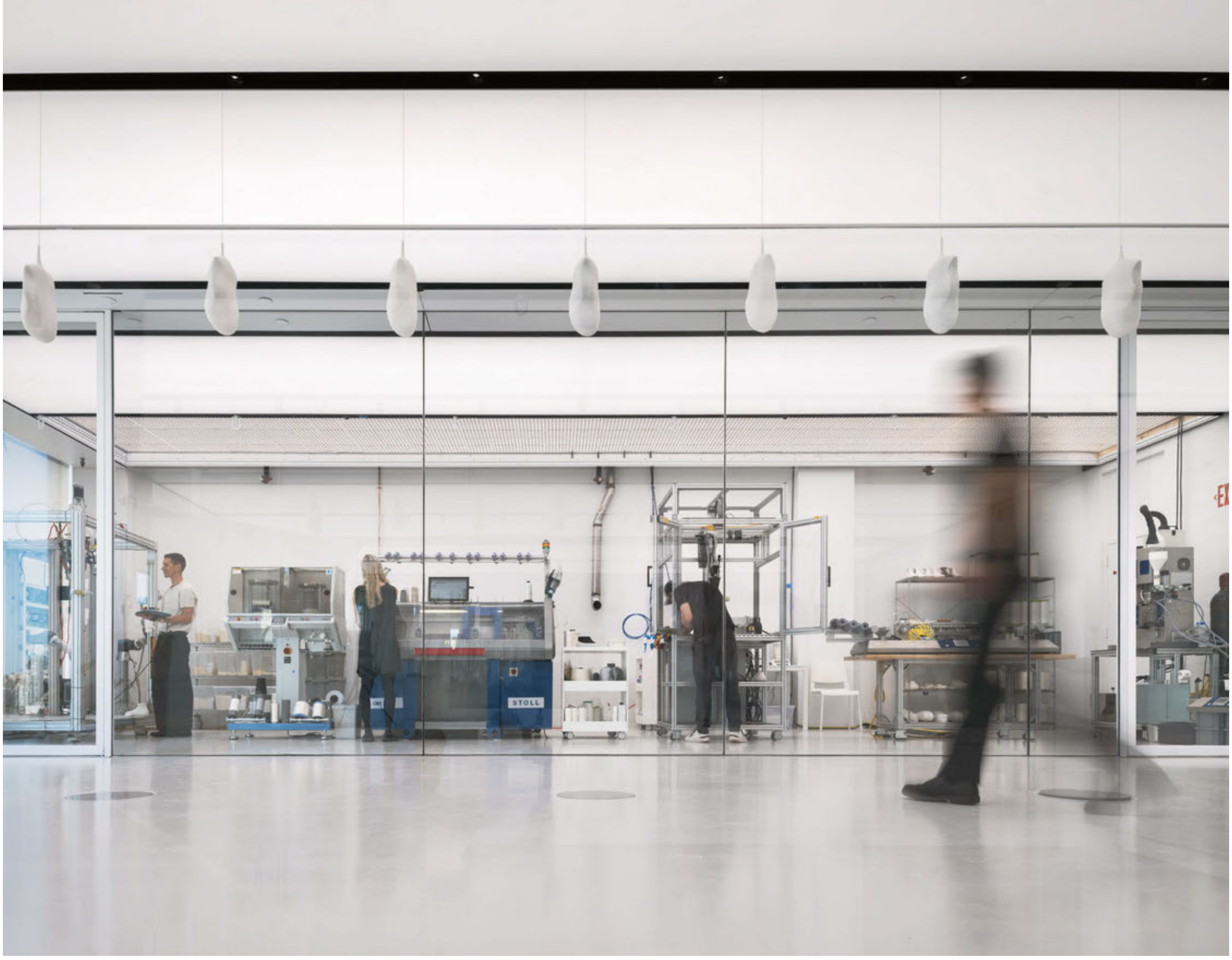

Client: Neri Oxman
Lighting Design: Suzan Tillotson, Liyi Pan; Tillotson Design Associates, USA
Architect: Foster + Partners, USA; Adamson Associates Architects, USA
Architect of Record: AAI Architect PC, USA
Lighting Specified: Apogee, Eklipse, Litelab, Lucifer Lighting, Nanometer, Zaniboni
Photography: Nicholas Calcott

"We closely collaborated with the Foster + Partners team to design the barrel vault ceiling, detail the millwork, and create proportional architectural channels to house the task lights. Foster + Partners had trusted us to execute our vision and provided invaluable support throughout the process, helping us to achieve our goals."

As for the client's involvement, Pan says that Oxman is "one of the kindest people we know and one of our most significant clients".

"The entire Oxman team was deeply engaged and hands-on throughout the design process, making collaboration both dynamic and inspiring. Working with them was a truly great experience."

To that end, Pan reflects on the project with a great deal of pride, not just because of the harmonious nature of the job, but also the harmonious relationship between architecture and lighting.

"This project is one that I hold dear to my heart, and I am truly proud of how it turned out," she concludes. "Now that it is complete, it really feels like a high-tech research facility with carefully considered design elements. The lighting has been tailored to the use of each space, ensuring that every area is both functional and visually engaging. The architectural language flows consistently, with lighting enhancing the overall design, rather than standing as an element of its own.

"The studio looks fantastic, and is a space that Oxman team can be proud of. We've heard many positive remarks, and we believe the studio successfully reflects Oxman's vision."

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101 Goswell Road
London, UK

When Zaha Hadid Architects sought to renovate its Clerkenwell headquarters, it called on **Erco** to install a flexible lighting system that would befit the site's transformation.

Known for radical designs like the MAXXI art museum in Rome and the London Aquatics Centre, Zaha Hadid Architects (ZHA) faced a different type of challenge in overhauling its London headquarters. Instead of a new building, the architecture practice has renovated 101 Goswell Road, a former garment factory. A custom-designed lighting system from Erco played a crucial role in this transformation, allowing the historic building to become a flexible environment for multi-faceted and collaborative forms of work.

ZHA has occupied the seven-storey former factory since 2012, but the team was previously divided between this property and a converted schoolhouse on nearby Bowling Green Lane. A shift in thinking came as a result of the Covid-19 pandemic, when employees were primarily working from home. The ZHA directors saw an opportunity to consolidate to a single location and rethink how the office should function. Rather than trying to pack in as many desks as possible, the idea was to support different types of work style, offering staff greater choice and flexibility in how they work.

"We needed to give them a reason to make the journey into the office," explains Director Chris Lepine. "We came to the conclusion that space for meetings and collaboration was key."

With larger floorplates and a more visible street presence than the old schoolhouse, the Goswell Road building was considered the most future-proof option, but it also presented challenges. The building had very low ceilings and a stair and lift core located close to the end wall, so natural light was unable to reach much of the interior.

"We had one very long wall with no daylight coming through," recalls Lepine. "We realised that, if we were going to do this refurbishment right, we would have to create lighting that did the space justice."

Enhancing the feeling of spaciousness was the starting point for the human-centric lighting system developed with Erco. Opton wall-washers improve the overall perception of brightness, while Jilly downlights for track create the impression that ceilings are higher than they actually are.

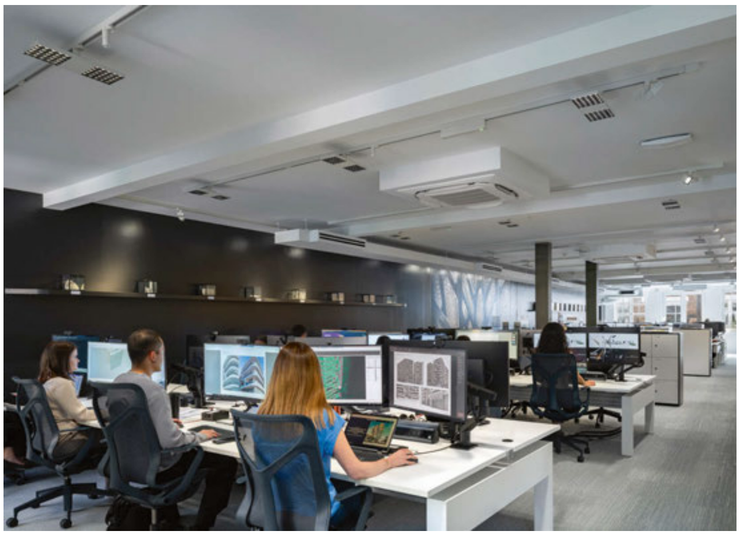
Illumination is delivered discreetly to where it is needed, rather than across the entire space, with light fittings that are largely hidden from view. This improves visual comfort without creating obvious patches of light and shadow. "Sometimes I don't realise the lights are on until I'm right under them and look up," adds Lepine.

With spotlights that can be easily repositioned in the track without tools, a key advantage of the Jilly system is its flexibility. This was a key goal in the reconfiguration of 101 Goswell Road, which was developed with ZHA's Analytics + Insights unit (ZHAI), a research group that uses digital data and artificial intelligence to intelligently predict the future of workspace design.

"In the past, there was a one-size-fits-all approach in office design, but that has completely gone out of the window," says Ulrich Blum, Co-Lead of ZHAI. "Workspaces need to be adaptable to, even on short notice, cater for differences in how teams work together."

This led to a design that provides fewer desks but offers a wider variety of spaces where people can come together. One example of this is the fourth

Zaha Hadid Architects



Images: Gavriil Papadiotis

floor, which has been converted into a social space that can facilitate casual meetings and chance encounters.

Circulation spaces are located towards the centre of the floor plan, anchored by a multi-faceted cork wall that extends through the full height of the building. Track mounted Opton and recessed Starpoint luminaires in 3000k give a warmer colour temperature here, emphasising this as the building's 'heart', in contrast with the cooler tones of lighting within the workspaces. Opton spotlights meanwhile offer dramatic, directional illumination to architectural models and drawings that are dotted throughout the building, as a testament to the impressive scope of architectural projects that ZHA produces.

Casambi Bluetooth wireless control allows lights to be easily switched or dimmed, either individually or in groups, which comes in useful when ZHA wants to change up its displays. But it also makes it easy to create spatial variety, so staff can find a place to work that suits them best.

"When people work from home, they are able to personalise everything," says Blum. "This autonomy is something they really cherish, so we needed to give them the ability to influence their environment."

The system is also responsive to fluctuations in occupancy, turning off lights automatically in spaces that are not in use, which improves energy efficiency.

The ground and basement floors combine exhibition galleries with facilities for design research and digital fabrication, allowing ZHA to create varied showcases of architecture innovation. These floors also facilitate other public-facing activities, from intimate dinners and drinks events, to workshops and panel talks. Erco's Parscan 48V spotlights allow ZHA to highlight different zones, depending on the use.

"We can orient the room in different ways," says Melodie Leung, Associate Director at ZHA. "Sometimes we want it to be very broad and unified as a space, other times we want it to be more dramatic."

Leung believes these shopfront-style spaces play a crucial role in helping people understand the process behind ZHA's architecture. One recent exhibition incorporated dynamic lighting effects that gave a sense of animation to the objects and materials on display. "It's really important for us to create an environment," she adds, "so when people enter, they're entering the world of Zaha Hadid Architects."

Since moving back into 101 Goswell Road in late 2021, ZHA has been trialing different combinations of remote working with in-office collaboration. The response so far has been positive, with staff noticeably mingling and interacting even more, despite being in the office less. The result is a dynamic environment that feels befitting of an architectural practice with its focus firmly on the future.

Zaha Hadid Architects and Erco are reuniting for this year's Clerkenwell Design Week, celebrating their continued collaboration. Attendees are invited to join engaging talks and exclusive tours of the remarkable office and gallery project, a stunning example of innovative design and lighting expertise.

www.zaha-hadid.com

www.erco.com

case study

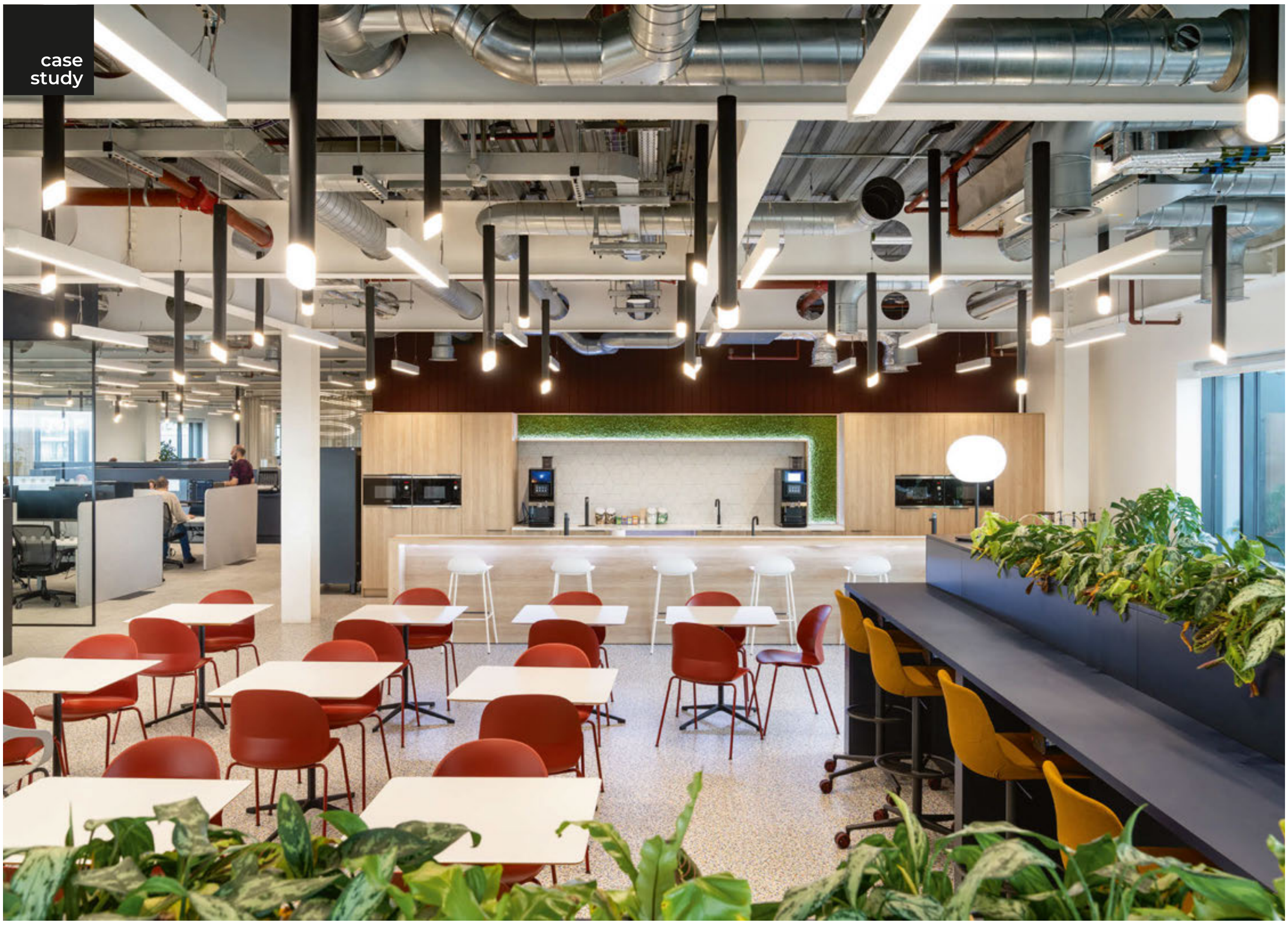


Image: Tom Fallon Photography

BDO Offices
Manchester, UK

A selection of luminaires from **Hacel Lighting** bring a vibrant aesthetic to BDO's Manchester office.

Hacel has completed a transformative lighting project for BDO, an international business advisory and accountancy firm, at its prestigious Manchester workspace.

Located on the banks of the River Irwell in the thriving New Bailey area, the project utilises Infinitas, Solos, Explora Halo, and an extensive, innovative application of Chyme pendants to create a vibrant and highly productive space for BDO's North West team.

The lighting design focused on enhancing staff wellbeing by delivering superb illumination across diverse areas, including meeting rooms, offices and breakout spaces. Many areas incorporate biophilic elements, further contributing to a positive and engaging environment.

Hacel's high-quality luminaires have been used across both floors to achieve an impactful design with excellent photometric and UGR19 performance where required, and high efficacy to minimise ongoing running and maintenance costs.

The imaginative use of Hacel's luminaires across the lighting scheme, designed by Creative License, has resulted in a dynamic and modern workspace that reflects the vision of excellence and innovation.

Kevin Mayers, Regional Sales Manager, Hacel, comments: "Although we regularly work with clients to bring their workspaces to life, the iconic new building in Manchester with a high-profile client such as BDO, needed something different. Working with Creative Licence to provide a compliant yet unique workspace, especially utilising the Chyme pendants as a unique feature, makes this a truly special project."

Hacel's Chyme is a recurring theme across the scheme. A versatile solution designed for modern commercial spaces, Chyme's sleek, minimalist design blends seamlessly into various architectural styles.

Andrew Lord, Director, Creative License, comments: "Working closely with Hacel, our goal was to design a visually engaging workspace that seamlessly blends functionality, energy efficiency, and contemporary aesthetics.

"The strategic placement of the Chyme and Explora pendants within the open void ceiling not only enhances the architectural character but also creates subtle spatial divisions, defining distinct areas while maintaining an open and cohesive environment.

"The successful partnership between Hacel and Creative License has delivered an inspiring environment to support productivity, collaboration and employee wellbeing."

David Cockburn, Managing Director, Hacel Lighting, comments: "This project highlights Hacel's expertise in providing tailored smart lighting solutions that meet the unique needs of premium commercial spaces, combining the best of British luminaires with aesthetic appeal and photometric performance."

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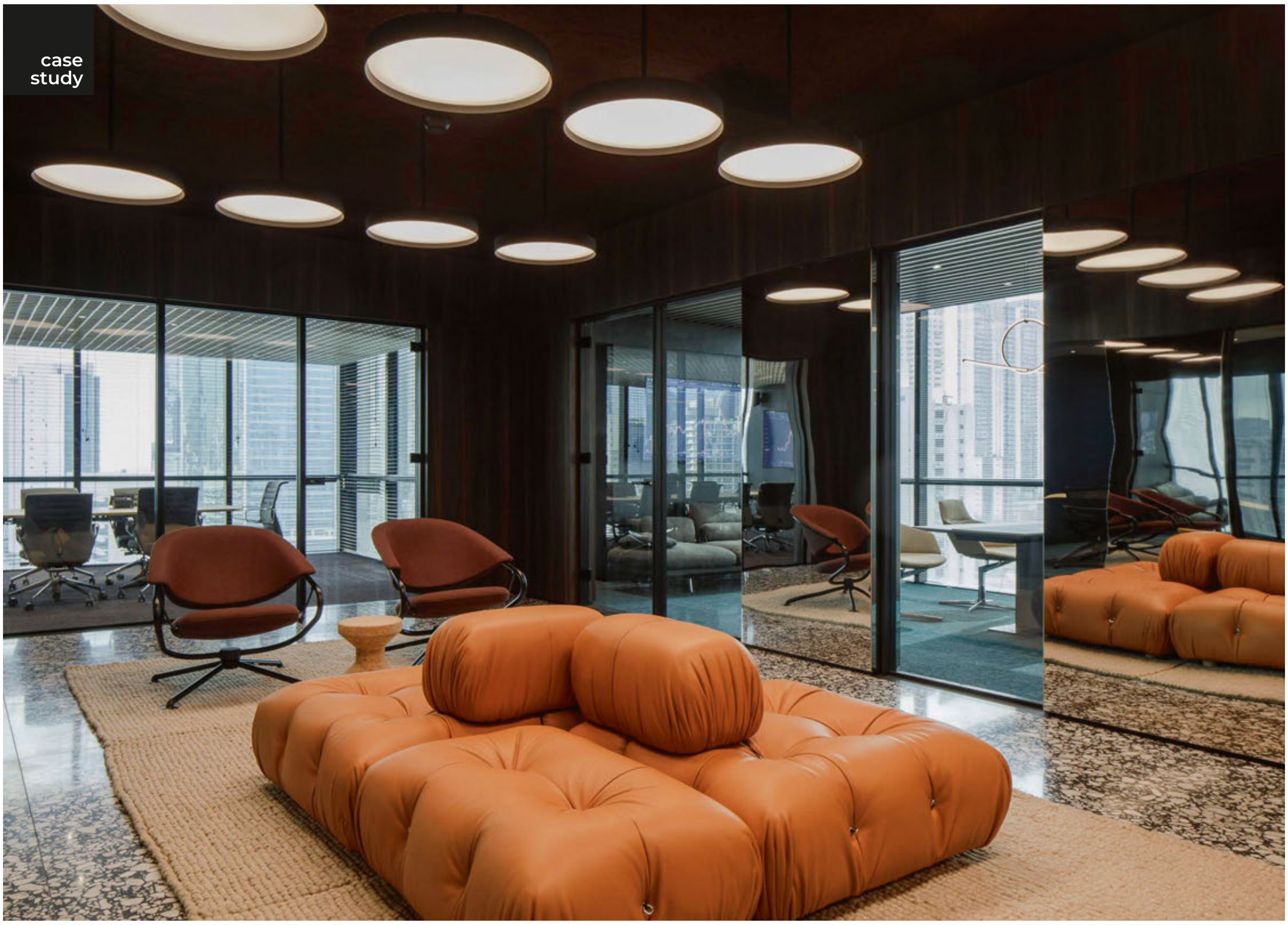

Deribit Corporate Office

Panama City, Panama

Tying together the powerful elements of Derebit's new Panama City office, **Neko Lighting's** Sugar range adds a subtle yet energising aesthetic to the space.

The corporate office of Deribit in Panama City's Marbella district presents a striking interplay of materials – dark terrazzo floors meet tinted glass partitions, while mirrored surfaces create an illusion of expanded depth.

At the heart of this carefully composed space, Neko's Sugar series ceiling lights emerge as the subtle yet powerful element that ties the design together. Designed by SKETCH, the semi open layout masterfully balances collaborative energy with areas for focused work. Against a backdrop of monochromatic stone textures accented by the orange tone furnishing, the lighting faced a unique challenge: to complement the moody aesthetic while ensuring an energising, productive work environment.

Neko's Sugar series ceiling lights answered with quiet authority. Their clean circular profiles, adorned with gold accented trim rings, float above workstations like minimalist discs.

Arranged in deliberate order, they counterbalance the angular geometry of glass dividers, while subtly echoing the office's stone patterns. Beyond aesthetics, their technical prowess shone: the microprismatic optic structure cast a frosted glass-like diffusion, bathing desks in shadowless light that maintained the room's tone allure. Glare vanished; visual clarity thrived.

What makes this installation compelling is how light negotiated with materials. The Sugar fixtures' gold detailing whispered alongside orange upholstery, creating a chromatic dialogue that felt intentional yet effortless. In mirrored surfaces, the lights performed a delicate duet, their glow reflecting to amplify spatial volume without overwhelming. Even the semi-private work nooks, defined by tinted glass, benefited from the fixtures' strategic placement, which preserved visual continuity while respecting acoustic boundaries.

This project reveals how lighting can act as a cultural translator. By respecting the tone of Deribit's office space, while addressing the practical demands of office lighting, Neko's design didn't just solve a problem, it elevated the narrative of what workplace lighting can achieve.

www.nekolighting.com

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CELEBRATING A DECADE OF LIGHTING DESIGN

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CELEBRATING A DECADE OF LIGHTING DESIGN
SHORTLISTED

Image: Ossip

Tripolis Park
Amsterdam, Netherlands

Home to major tenants such as Uber and an international law firm, Amsterdam's Tripolis Park has been illuminated with a smart, energy-efficient lighting solution from **Trilux**.

Trilux's latest project at Tripolis Park in Amsterdam showcases a pioneering office campus that blends heritage-listed buildings with a striking new 11-storey structure. Developed by Flow Development, the revitalisation focuses on user wellbeing, maximum sustainability and future-proof technology.

Tasked with delivering a smart, energy-efficient lighting solution across indoor and outdoor areas from a single source, Trilux has installed approximately 13,000 light points. Standard luminaires, including 39er G3, Onplana, Lenty and Sonnos, were customised to meet the project's demands. A standout feature is the foyer's So-Tube light sculpture, while outdoor spaces and cascading roof terraces are illuminated by ConStela, 8841 bollard luminaires and Skeo Q units. These luminaires seamlessly bridge the historic and modern elements of the campus.

3,000 lights incorporate advanced TRI-Sensors that provide motion detection, daylight control and environmental data via a wireless mesh network, optimising the indoor climate and energy performance through a future-ready Smart Grid.

"At the start of the project, the specification focussed on high-quality, glare-free light – without mentioning Human Centric Lighting, which dynamically changes the light colour to mimic daylight and is perceived as particularly pleasant," recalls project leader Willem Dammers, CEO of Trilux Benelux.

A demonstration convinced Flow Development to include Tunable White luminaires with HCL throughout the campus. Employees can even adjust the light intensity or colour to suit their preferences via an app if desired.

Tripolis Park has received numerous certifications and awards, supporting its position as a unique and pioneering office project. Its ratings in sustainability, design and user wellbeing include a BREEAM-NL "Outstanding" rating, making it one of the most sustainable buildings in the Netherlands.

The Well Platinum certification attests to the campus' outstanding work environment, promoting mental, physical and social wellbeing for users.

The site is home to major tenants such as Uber and an international law firm, whose employees benefit from the exceptional design. Visitors and residents alike enjoy the spectacular architecture and the publicly accessible park.

www.trilux.com

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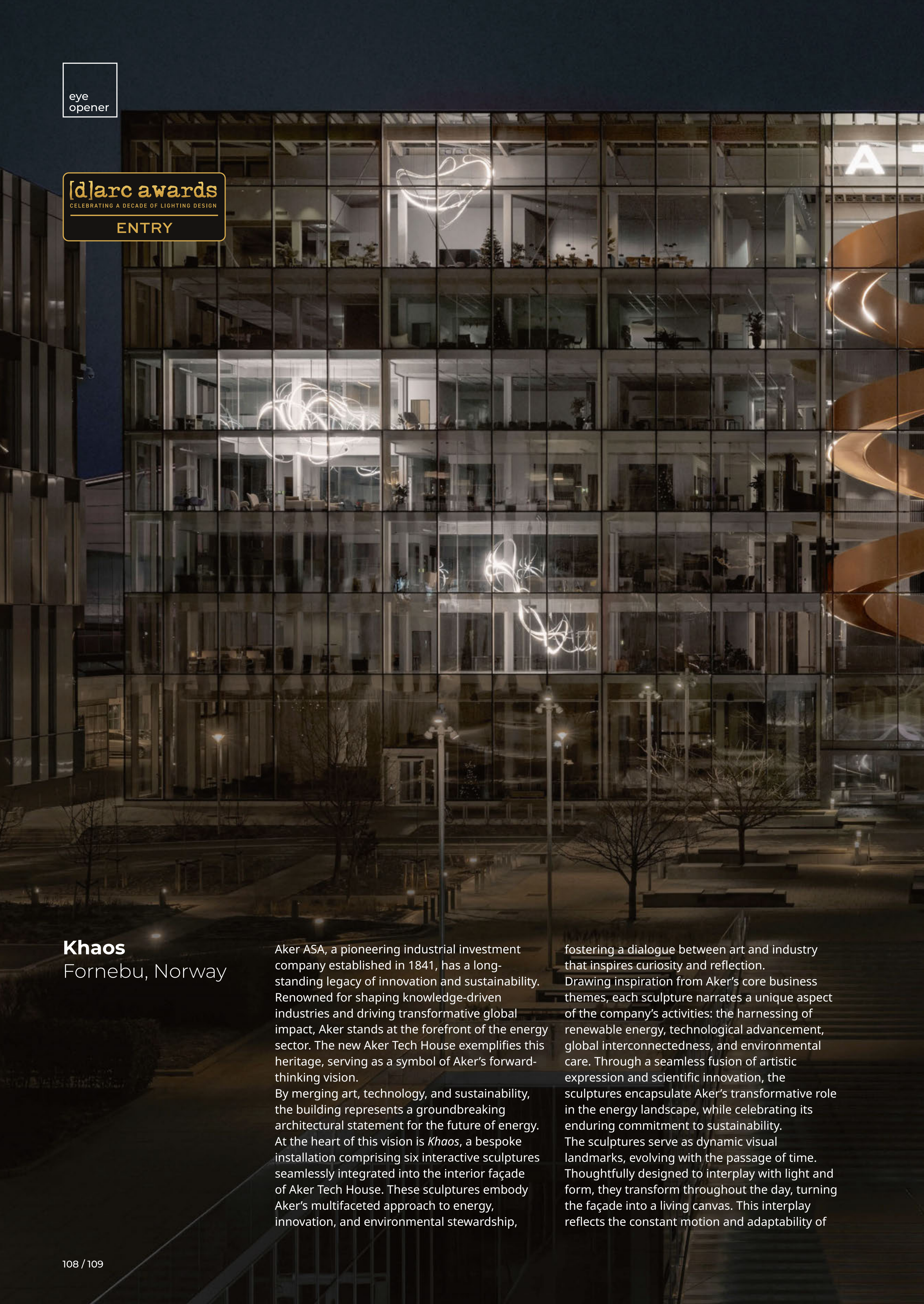


[d]arc awards
CELEBRATING A DECADE OF LIGHTING DESIGN
ENTRY

Khaos

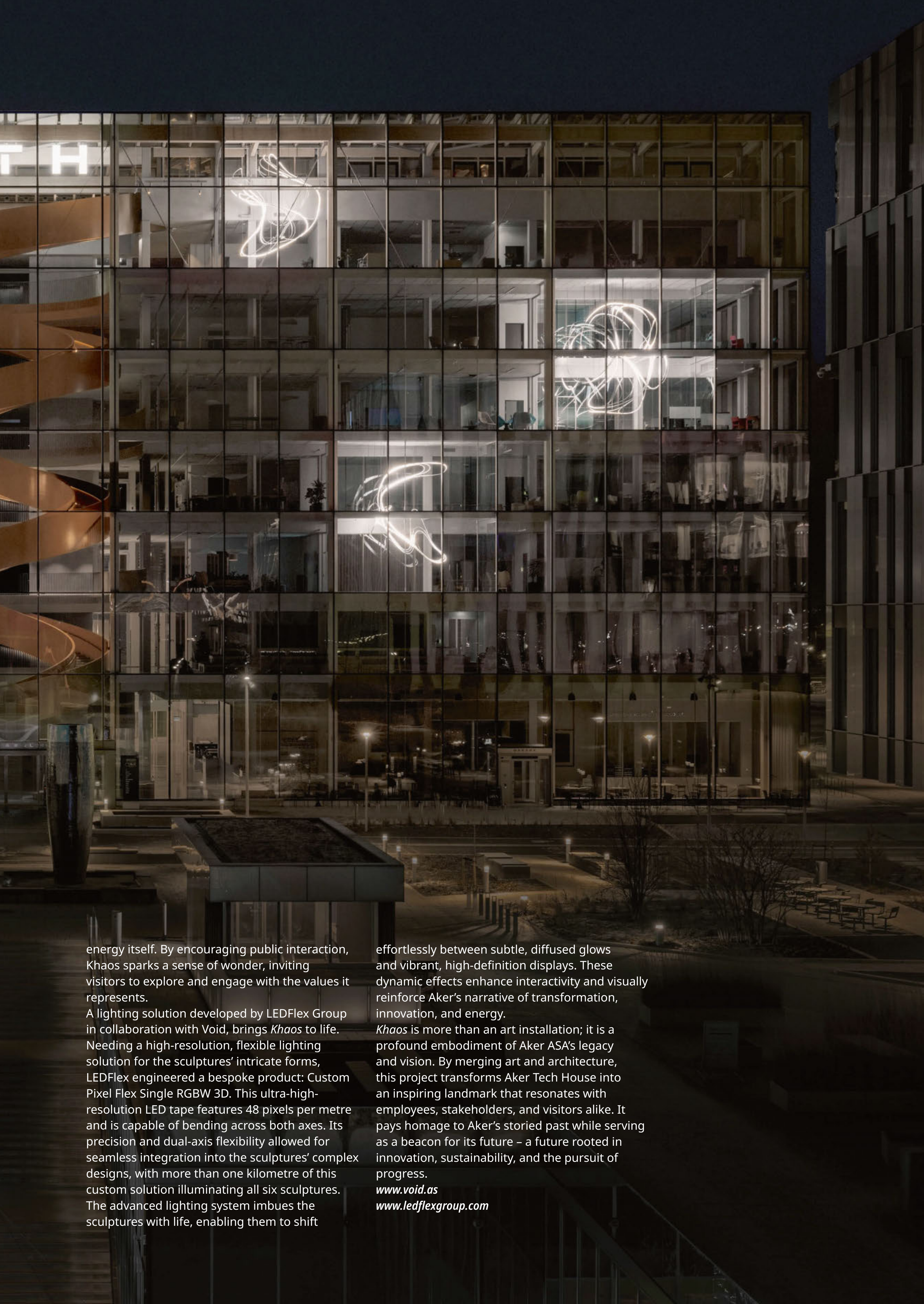
Fornebu, Norway

Aker ASA, a pioneering industrial investment company established in 1841, has a long-standing legacy of innovation and sustainability. Renowned for shaping knowledge-driven industries and driving transformative global impact, Aker stands at the forefront of the energy sector. The new Aker Tech House exemplifies this heritage, serving as a symbol of Aker's forward-thinking vision.

By merging art, technology, and sustainability, the building represents a groundbreaking architectural statement for the future of energy. At the heart of this vision is *Khaos*, a bespoke installation comprising six interactive sculptures seamlessly integrated into the interior façade of Aker Tech House. These sculptures embody Aker's multifaceted approach to energy, innovation, and environmental stewardship, fostering a dialogue between art and industry that inspires curiosity and reflection.

Drawing inspiration from Aker's core business themes, each sculpture narrates a unique aspect of the company's activities: the harnessing of renewable energy, technological advancement, global interconnectedness, and environmental care. Through a seamless fusion of artistic expression and scientific innovation, the sculptures encapsulate Aker's transformative role in the energy landscape, while celebrating its enduring commitment to sustainability.

The sculptures serve as dynamic visual landmarks, evolving with the passage of time. Thoughtfully designed to interplay with light and form, they transform throughout the day, turning the façade into a living canvas. This interplay reflects the constant motion and adaptability of



energy itself. By encouraging public interaction, Khaos sparks a sense of wonder, inviting visitors to explore and engage with the values it represents.

A lighting solution developed by LEDFlex Group in collaboration with Void, brings *Khaos* to life. Needing a high-resolution, flexible lighting solution for the sculptures' intricate forms, LEDFlex engineered a bespoke product: Custom Pixel Flex Single RGBW 3D. This ultra-high-resolution LED tape features 48 pixels per metre and is capable of bending across both axes. Its precision and dual-axis flexibility allowed for seamless integration into the sculptures' complex designs, with more than one kilometre of this custom solution illuminating all six sculptures. The advanced lighting system imbues the sculptures with life, enabling them to shift effortlessly between subtle, diffused glows and vibrant, high-definition displays. These dynamic effects enhance interactivity and visually reinforce Aker's narrative of transformation, innovation, and energy.

Khaos is more than an art installation; it is a profound embodiment of Aker ASA's legacy and vision. By merging art and architecture, this project transforms Aker Tech House into an inspiring landmark that resonates with employees, stakeholders, and visitors alike. It pays homage to Aker's storied past while serving as a beacon for its future – a future rooted in innovation, sustainability, and the pursuit of progress.

www.void.as

www.ledflexgroup.com

40 Under 40 Awards

Aimed at celebrating the work of exceptional lighting designers across the world, the **40 Under 40 Awards** returns for its 10th edition this year, with the entry window for nominations opening this May.

The 40 under 40 Awards are in their tenth year and entries for the next cohort open in May.

These awards are a unique annual competition to select young and outstanding individuals who work in a creative capacity with the application of lighting in architecture. The awards began in 2016 as part of the now defunct Lighting Design Awards and the website details all the past winners - 320 to date - an amazing international line up of talented people.

The end of 2021 saw the 40 under 40 award resurrected after being handed on to Filix Lighting, which had previously sponsored the award and wanted to keep it alive. With the help of Light Collective, the awards continued. 2025 sees the addition of new sponsor, Selux, whose support enables the awards reach further.

Nominations are accepted from international candidates under 40 and nominators must cite why they are exceptional before nominees are contacted to enter a submission. Candidates should be passionate about lighting and display outstanding talent and potential, and have demonstrable achievements in the field.

Each year the competition elicits a large response with on average 300 nominations received, and from that over half of the nominees filling out the submission form and becoming eligible for judging. The entries always represent a wide spread of countries, with the UK and the USA having the most submissions. While these countries have long been hubs for lighting design, the spread of entries from all the other countries demonstrates how lighting design keeps growing across the globe.

The global nature of the lighting industry is also reflected in the choice of judges:
Carla Wilkins, Lichtvision, Germany
Giuseppe Simone, Antumbra Lighting Design, Australia
Paola Pietrantoni, Studio Atomic, USA
Jeff Shaw, Arup, UK
Noemi Barbero, VBNB lighting, Spain
Waleed Fakousa, CD+M Lighting Design Group, UAE

The judges always have a really difficult task determining a top 40. The scores are normally incredibly tight. To those who missed out in previous years, the team encourage people to submit again for 2025. The overall quality of the submissions is always outstanding and it can be very close between entrants. Previous judges always comment on how tough the judging is and

The 40 Under 40 Judges (Clockwise from top left): Carla Wilkins, Lichtvision; Giuseppe Simone, Antumbra Lighting Design; Paola Pietrantoni, Studio Atomic; Jeff Shaw, Arup; Noemi Barbero, VBNB Lighting; Waleed Fakousa, CD+M Lighting Design Group

urge people to try again for the 2025 awards.

The 40 under 40 website hosts information on the previous winners, and shares the reason that they ‘Chose Light’ to help inspire others. Information can be found on the website about how to enter with FAQ and the competition rules.

Are you are a worthy recipient or do you know someone who deserves an opportunity to be recognised for what they have achieved in lighting so far?

Nominations open in May and nominees have until September to submit. Winners will be announced in the Winter and the team is planning a celebration of 10 years at Light + Building, Frankfurt in 2026. If you are a past recipient or hoping to be part of the Class of 2025, make sure you plan to be there in March 2026.

Commenting on their decision to support the programme, Marko Jurman, CEO at Filix Lighting, says: “At Filix, we believe in recognising emerging talent shaping the future of lighting design. The 40 under 40 programme highlights designers whose ideas and energy are moving the profession forward. It’s about celebrating creative thinking, fresh perspectives, and the evolution of lighting as a design discipline. This year marks 10 years of the awards, and we’re proud to be part of this milestone.”

Sebastian Winnig, International Sales Director at Selux, adds: “At Selux, we are constantly striving to push the boundaries of what’s possible. We believe that the 40 Under 40 programme helps the next generation of visionary designers bring their ideas and commitment to light, shaping the future of lighting. With our support, we aim to guide talented young lighting designers who, through their fresh approaches, are making a significant contribution to a sustainable future. We are proud to be part of this programme and, together with all the designers, Light Collective, and Filix, to further promote and celebrate the ten-year anniversary of this outstanding award.”

www.40under40.events

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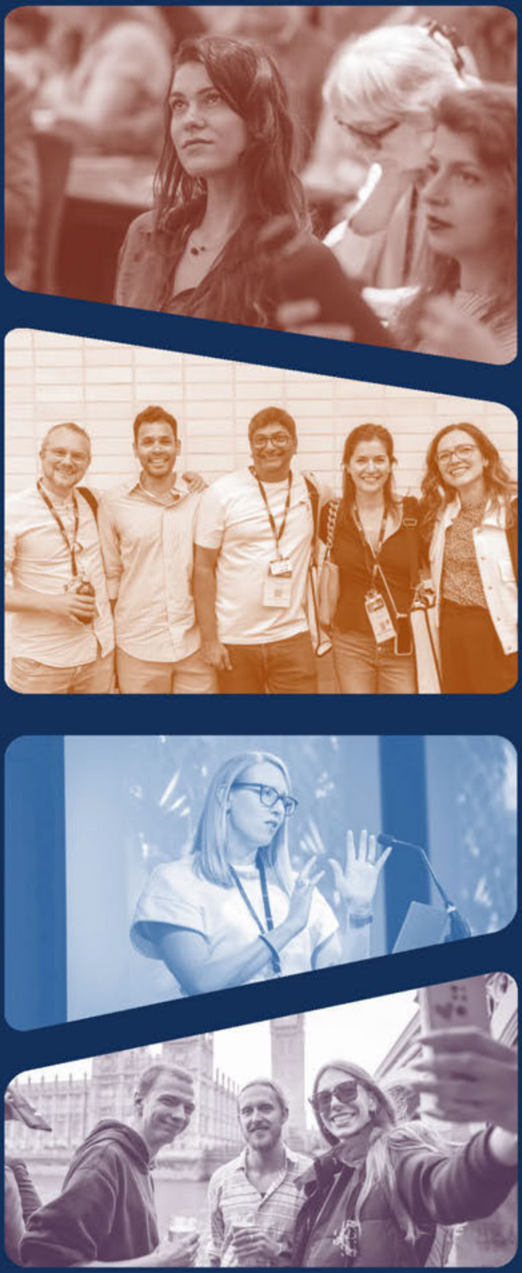

LEDucation 2025

By now a popular staple in the North American lighting events calendar, LEDucation was held at the New York Midtown Hotel on 18-19 March. Welcoming around 10,000 visitors, the show, organisers hailed it an “outstanding” success.

MASCAP
XICO

Image: Frank Ammaccapane, Natural Expressions

The LEDucation Trade Show and Conference, organised by the Designers Lighting Forum of New York (DLFNY), returned once again to the New York Hilton Midtown this March, bringing together lighting professionals from across the USA and beyond.

North America’s largest annual lighting industry gathering, the event once again proved to be an essential platform for professionals to discover the latest in lighting technology, connect with industry leaders, and participate in world-class educational programming.

This year’s event saw 475 exhibitors showcasing their new products and technologies across four exhibition halls. The show floor, along with enhanced networking areas and educational sessions, contributed to a thriving, bustling atmosphere for attendees.

Jamie Eck, LEDucation Co-Chair, said following the event: “LEDucation continues to grow, not only in size, but in the value it provides to the lighting community. From a small tabletop event to a premier tradeshow in the heart of New York City, it has been an incredible evolution.

“The energy on the show floor and in our conference sessions was outstanding. The positive feedback from exhibitors and attendees underscores how much this event means to the industry.

“We would like to extend our deepest gratitude to our dedicated committee, rep agencies, sponsors, the press, and everyone who has contributed to making this event possible.”

With approximately 10,000 attendees, LEDucation once again, exceeded expectations, providing a vibrant and dynamic environment for business, education, and networking.

LEDucation will return in 2026, taking place at the New York Midtown Hotel on 14-15 April.

www.leducation.org

LEDucation 2025 Product Highlights

1 POI Wash Family
SGM

The POI Wash Family delivers precise, high-performance outdoor illumination with custom RGBW quad-chip LEDs and TruColor technology for exceptional colour accuracy. Available in 15W, 30W, 75W, 150W and 250W, these fixtures feature carefully selected optics, flexible control options including DMX and Airglow - and are even made with recycled aluminium. Rigorously tested to meet SGM's high standards, the POI Wash Family embodies SGM's DNA, offering superior functionality, precise colour mixing, and premium technology for any architectural lighting application.

www.sgmlight.com

4 X Series Downlights
DMF Lighting

DMF Lighting's two-inch X Series Downlight Collection offers unique acrylic trim options that provide the same high performance as other trims. These performance trims, offered in both round and square apertures, are available in Open, Hyperbolic and Float designs. DMF's products boast a modular design (housing, light engine module and trim) that feature tool-less, field-interchangeable optics, modules and trims, allowing for simply serviceability, easy design changes, and onsite aiming flexibility to meet specific application needs.

www.dmflighting.com

7 NATOUCH-4
Nicolaudie

The NATOUCH-4 is a sleek and intuitive lighting control solution from Nicolaudie. This device seamlessly integrates with the SLESA, DINA, and STICK controllers, offering a user-friendly 4-inch capacitive touchscreen for effortless scene recall and live adjustments. PoE simplifies installation by delivering both power and data over a single ethernet cable while the pre-loaded Arcolis Remote application, readily available upon setup, allows for instant remote control functionality.

www.nicolaudie.com

10 Erden Brass Family EB2
Lumascape

The Erden Brass Family EB2 delivers bold, high-performance illumination in a compact, versatile form. Suitable as an uplight, turret, or marker, it offers 920lm and colour options including RGBW, RGBA, tunable white, and static white. Built from corrosion-resistant materials with a factory-sealed design, EB2 ensures lasting durability. Seamlessly integrating into architecture or landscape, it provides striking visual impact and flexible solutions for a range of outdoor and architectural lighting needs.

www.lumascape.com

2 Aria Family
Litecontrol

A bold reimagining of linear lighting that brings structure and clarity to a space without weighing it down, this family of open-centre luminaires delivers a strong visual presence while maintaining a light, airy aesthetic. Its luminous connectors and glowing intersections create seamless, sculptural expressions of light. Aira's matching wall-mount fixture carries the same sleek design and top-tier performance, all while satisfying ADA standards and effortlessly linking wall and ceiling applications. With integrated drivers and smart technology on board, installation is a breeze and ceiling friendly.

www.currentlighting.com

5 Flex Graze HO SC
Acclaim Lighting

Flex Graze HO SC is a uniquely dual-bend flexible linear LED fixture, designed for low-profile linear wall washing and grazing. It is suitable for indoor or outdoor use and can bend in two directions, ensuring placement options. Acclaim's powerful driver solutions work in combination with the Flex Graze to give you the control options you need. Available in 2700K, 3000K, 3500K 4000K and 5700K, Flex Graze HO SC provides consistent colour temperature rendering across the entire length of every spool.

www.acclaimlighting.com

8 D 200 WE System
Radiant Architectural Lighting

The D 200 WE projector is an interior or exterior effect-lighting luminaire. The 16x LED light-engine, LV multi-channel DMX drivers and textured glass optic can all be customised to create decorative, dynamic lit-effects. Each fixture can be run at up to 20W, providing up to 1,600lm, depending on the LED colours and CCTs and textured glass used. The lumen output varies during the dimming sequence. The working life is up to 100,000 hours, as there are no moving parts..

www.radiantlights.co.uk

11 Louis
Landscape Forms

Inspired by the philosophy of architect Louis Kahn and designed by Barcelona-based Urbidermis, Louis merges clean, modernist geometries with a versatile and sustainale lighting solution, tailored for urban environments. Distinguished by its gently arched aluminium housing, which softens its rectilinear form while subtly concealing catenary attachment points, Louis provides precise illumination while contributing to the visual identity and emotional atmosphere of urban spaces.

www.landscapeforms.com

3 Millwork Series
Optique

The Millwork Series is a collection of 11 recessed and surface-mounted fixtures powered by Optique's Nano Neon ultra-thin profile light engine that provides a flawless, continuous smooth glow of light with no inconsistencies. Designed with woodworkers in mind, the dimensions of each fixture match common router bits to ensure a clean, discreet and professional finish in every application. The Millwork Series is offered in a variety of mounting angles, and a unique up/down configuration, which holds the Nano Neon light engine at various angles to provide flexibility and various lighting effects.

www.optique-lighting.com

6 Lalina Series
Coronet

The Lalina series by Coronet features two field-curvable and cuttable lighting systems that adapt effortlessly to complex spaces. Lalina Cove provides soft, indirect ceiling illumination, while Lalina Perimeter delivers seamless ambient wall lighting. Both systems, which can accommodate curves with internal radii as small as nine inches, feature a mud-in installation, ensuring a clean appearance with no visible hardware. They can be customised in length, light output, and colour temperature, making them ideal for office, hospitality, and retail settings.

www.coronetled.com

9 Caliber
Bold Lighting

Caliber is an innovative linear lighting solution that combines a compact form factor with high performance and flexible mounting, adjustability, and light control. The fixture adjusts up to 90° for precise aiming, while its optical flexibility makes it ideal for grazing, wall washing, and high-performance indirect lighting. For enhanced glare control, the system is designed with baffles that provide both longitudinal and cross-sectional shielding.

www.boldlighting.us

12 REV Hydro 6
Meteor Lighting

The REV Hydro 6 is a waterproof recessed downlight, engineered for outdoor applications, with an IP65-rated lighthead and powerbox for superior protection against dust and water. Delivering up to 90W and 7,200lm, it is ideal for high-ceiling installations, such as outdoor façades and natatoriums, that require powerful illumination. Featuring Archi-Color W+RGB technology, it offers dynamic lighting control with a balanced mix of 50% white and 50% RGB.

www.meteor-lighting.com

We look back at some of the most interesting and exciting product launches that were on display at **LEDucation** 2025.

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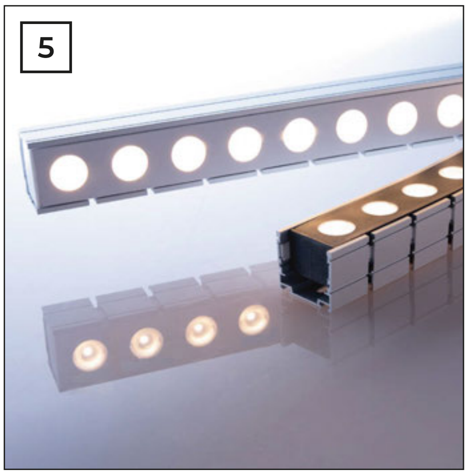

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STICK DE3 name
Living room
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2 lines
Warm white
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Cold white
Rainbow
Living room

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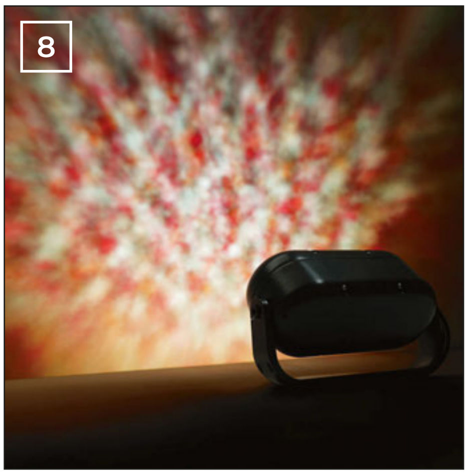

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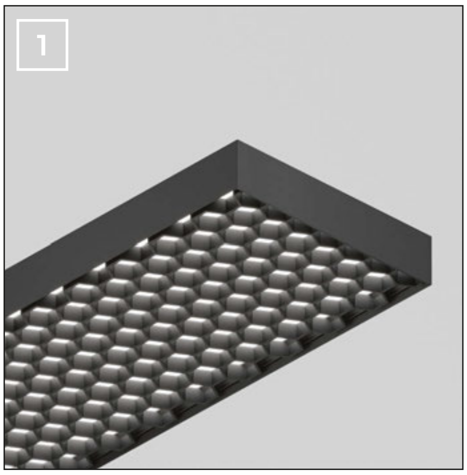
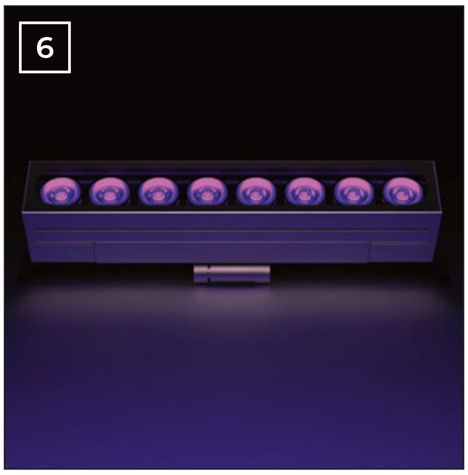




1 Nexa Suspended | 807

Vode

This thin, edge-lit pendant redefines versatility – offering low glare with optional honeycomb optics and a sleek, statement-worthy form. Its patent-pending, click-lock suspension simplifies installation, seamlessly blending power and mechanics. Whether a bold focal point or an understated presence, Nexa Suspended transforms commercial spaces with effortless sophistication. Adaptable, striking, and brilliantly refined – this is lighting, elevated.

www.vode.com

2 X-Treme 23

Aldabra

The smallest member of the new X-Treme family, this grazer is designed to redefine outdoor lighting standards. A fusion of cutting-edge LEDs and Aldabra's proprietary nanopolymeric resin technology enables impeccable light emission and extreme resistance, up to IP69 and IK10, within an ultra-compact 23mm wide body. Engineered for the harshest conditions, its fully encapsulated electronics, high-grade aluminium body, and protected optics ensure uncompromising durability, delivered in a sleek, minimalist design. A bold new benchmark in high-performance outdoor lighting.

www.aldabra.it

3 6W Micro Spotlight

Luxam

Luxam's 6W Micro Spotlight is both focusable 8-56° and dimmable at the touch of a finger. The 6W Spotlight can easily transform into a 55° framing shutter spotlight or a 16-35° zoom framing shutter spotlight. High CRI, flexibility, and ease of use, makes it a great option for low ceilings, galleries, exhibits, and architectural lighting.

www.luxam.com

4 Mosaic Flood

Times Square Lighting

The Mosaic Flood features tunable colour and a high CRI output, making it a versatile lighting solution. It also features tunable white from 1650K-8000K with a CRI of 90+ across the entire temperature range, ensuring exceptional colour accuracy. Rich blues, ambers, reds, violets, and greens can be added in gradients or fully saturate the output. Interchangeable reflectors provide beam angles from 10° to 60°. This fixture is ideal for retail spaces like car dealerships and clothing stores, perfect for illuminating artwork, or enhancing architectural entertainment settings.

www.tslight.com

5 MIDI Series

LEDLuks

The MIDI series is introducing three new minimalistic and compact additions inspired by LEDLuks' bestsellers. This family of refined pendant profiles is designed for VDU workstations, meeting EN 12464-1 standards with low glare (UGR<16). They come equipped with lens optics, offering a 60° beam angle for precise and efficient lighting perfect for offices.

www.ledluks.com

6 Argo Pro

Insight Lighting

Argo Pro elevates linear lighting with a powerful combination of performance and design. Boasting extended fixture lengths, a wider range of distributions, and higher outputs up to 20W/ft. Features like low-profile hinges and ProLink connections ensure seamless installation and a clean aesthetic. Accessorise it with optional louvres, visors and shields to provide both the illumination you need, and the glare-free comfort.

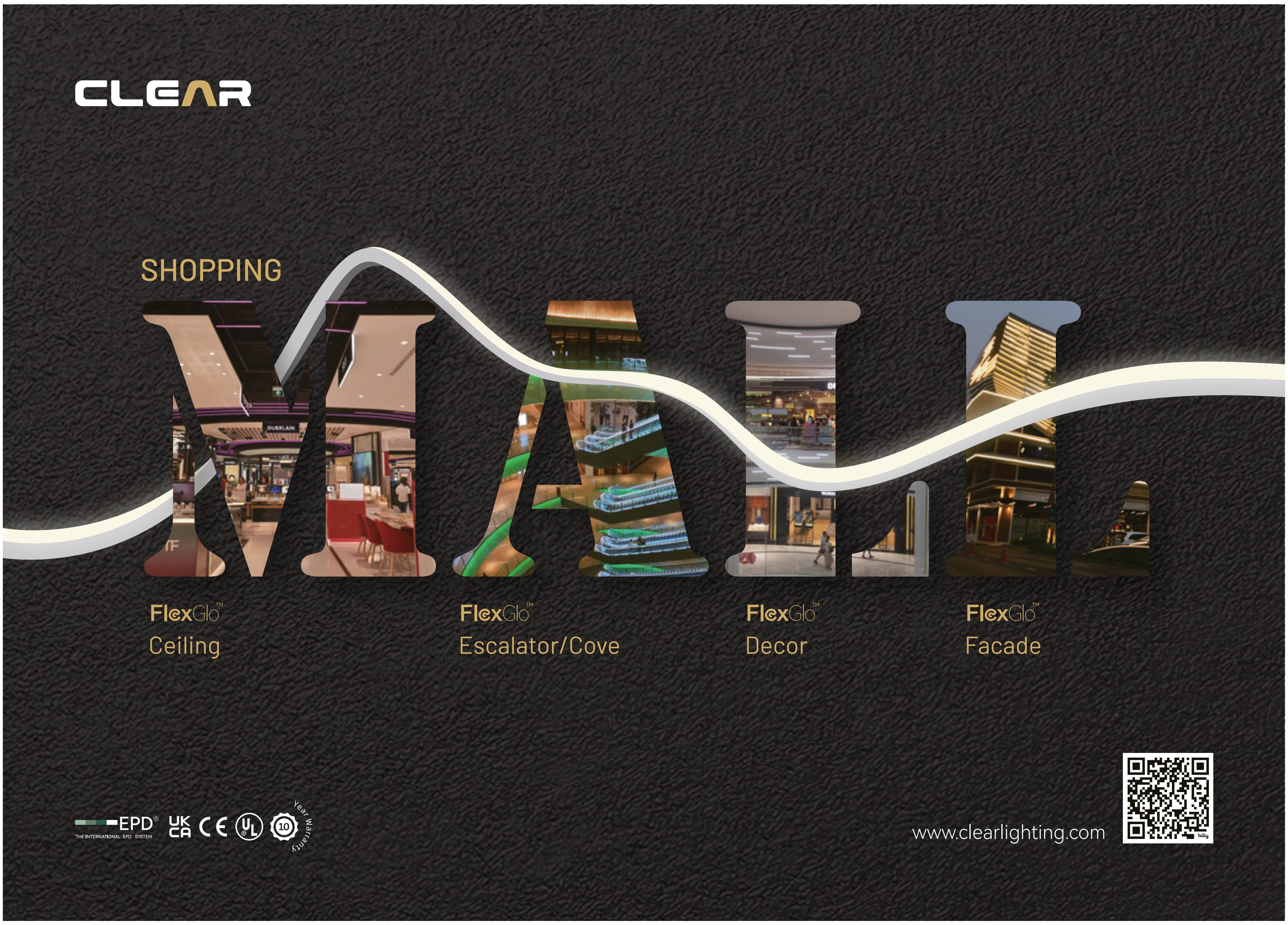
www.insightlighting.com

amerlux
A brand of Delta

GRID COVE

Reimaging what grid ceilings can be. Named a Top 10 must-see product at LEDucation 2025, Amerlux's Grid Cove redefines what's possible with grid ceilings, bringing together architectural cove lighting, indirect illumination and smooth ceiling transitions in a single, cohesive system. Designed for comfort and style, this fully integrated, grid-to-grid solution maintains ceiling alignment while elevating the visual experience. Choose from three distinct styles: grid cove, uplight and perimeter wash. Each delivers the clean finish and sophisticated look your design commands.

CONTACT AMERLUX



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www.clearlighting.com

DAVID MORGAN

Window Shopping

Following its launch at LiGHT 24 last November, David Morgan examines the IP65-rated LD234 window reveal luminaire from **LightGraphix**.

The motivation to start a lighting company can be many and various. In the case of Ian Boss, who started Tivoli Lighting in the late 1970s, we may never know his reasons; but fortunately the company survived, grew and in 1995 the company was purchased by Richard Hargreaves, who renamed it LightGraphix.

In 2016, the current management team of Robert Buxton and Simon Lyon purchased the company and have pursued a strategy of investment and growth for the company. From a staff of 24 in 2016, the company has grown and now has 96 employees based in Crayford, Kent.

From the early, Tivoli days, marine lighting was one of the key product collections, and this is still an important part of the LightGraphix range, including some luminaire types used for the challenging task of illuminating the exterior of yachts.

With an emphasis on high quality and high performance, the main market sectors for the company are architectural, marine, and display applications with a strong focus on exterior lighting. The company works closely with lighting designers as part of its new product development process for standard products, and has also created a dedicated custom luminaire department to deal with project specific requirements. With more than 30 overseas sales partners, more than 50% of LightGraphix products are exported.

LightGraphix products are manufactured using components produced and assembled in the UK, with 95% of product components sourced locally to the company. Most of the products are constructed using machined aluminium, brass and stainless steel components.

One of the newest products from LightGraphix is the IP65-rated LD234 window reveal luminaire, which was introduced at LiGHT 24 and has received a positive response from lighting designers.

It is understood that the decision to develop a new window-reveal luminaire arose from the company's close relationship with lighting designers and sales partners around the world. The LightGraphix luminaire design process involves as much interaction with specifiers and sales partners as possible, who helped to identify the key differentiators for a new product in this crowded market sector.

The marketing feedback for this development was that this new luminaire series should complement the existing range of LightGraphix projectors, uplights and linear luminaires, and should provide a low-glare light output, good colour temperature consistency, and a range of beam angles.

Existing products were criticised for their lack of fixing options to cater for different site conditions, along with difficulties in focusing. The LD234 was designed in-house by the LightGraphix

David Morgan runs **David Morgan Associates**, a London-based international design consultancy specialising in luminaire design and development and is also MD of Radiant Architectural Lighting.
Email: david@dmadesign.co.uk
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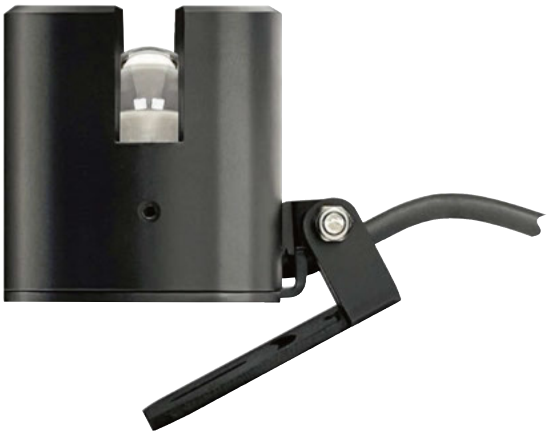
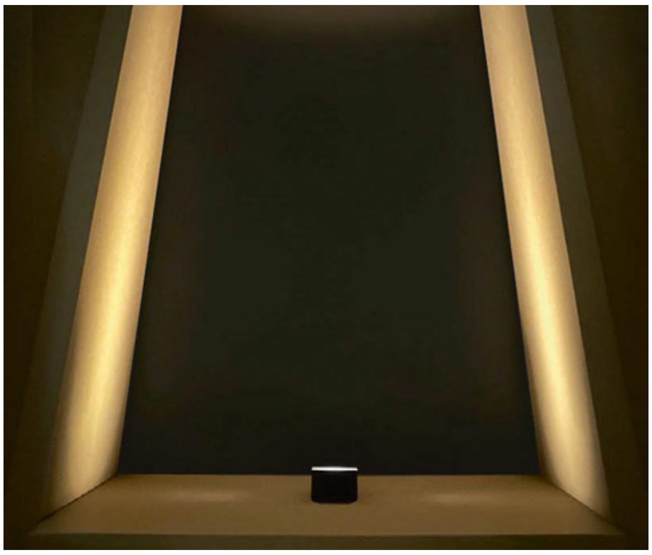




development team. The collaborative design process includes contributions from various members of the management and design teams, who work together to determine the best product solutions and configurations. For this product, where the optics play a key part in the product performance, a series of three custom polycarbonate lenses combined with a reflector system were developed and tested by the design team using the company's in-house photometric testing equipment. The range includes extra-narrow, narrow, and medium beam distributions. The sample that I was given to test gave an attractive lit effect with a clean distribution, which works well for the window reveal task. The lens is well recessed within the body so there is no visible glare from normal viewing angles.

The minimal design of the neatly machined aluminium LD234 housing includes a flat top, which is included as a useful design feature allowing the electrical contractors to aim all the luminaires on a project consistently using a low-cost digital inclinator. Cut away details on the sides of the body allow rainwater to flow away from the optics. LightGraphix offers a range of powder coat and wet spray finishes for the product, allowing it to integrate with a variety of architectural and landscape settings.

Despite the luminaire's compact size – 105mm wide x 55mm high x 55mm wide – the lumen output is sufficient for the task in hand although, as is so often the case with very narrow beam optics, the system is not particularly efficient. The LD234 is designed to be run at a range of drive currents from 350mA up to 700mA. When run at 700mA, 9.2W, the high-power Nichia LED light engine delivers 140lm with an efficacy of 15lm per circuit Watt. Light engines are available from 2000K up to 5000K with a CRI of 85 and 2 SCDM colour binning.

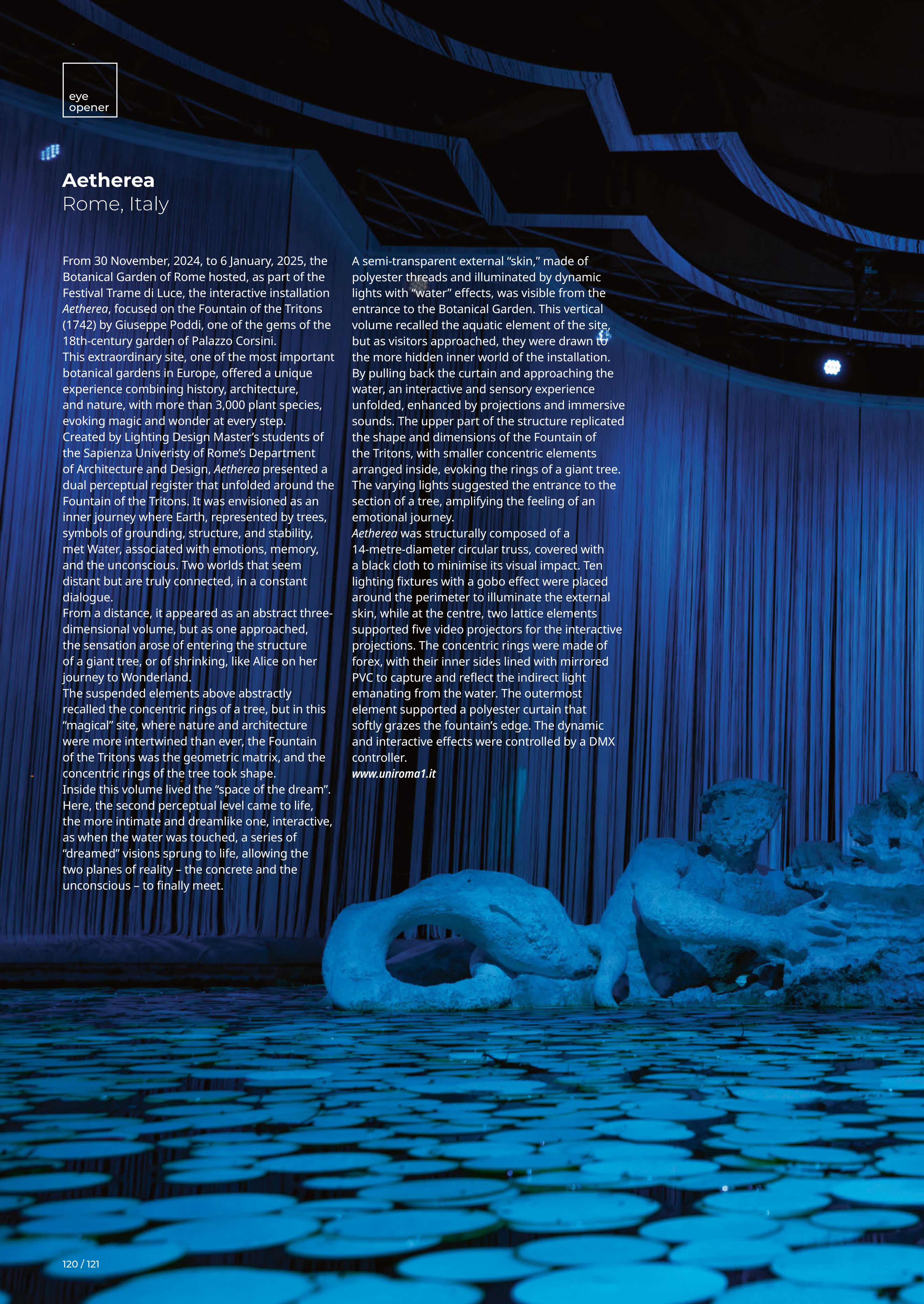
One of the most interesting features of the LD234 is the range of mounting options, which satisfy the initial marketing feedback. In its basic form, the luminaire incorporates a tilt adjustment mechanism up to 16°. Four set screws can be individually adjusted to aim and / or level the luminaire on uneven surfaces.

Three add-on adjustable mounting brackets types are also available so that the luminaire can be fixed directly to the window sill, the window frame or into a corner of a window reveal.

The LD234 is compatible with the LightGraphix Repair & Refurbish scheme, whereby luminaires can be returned for repair once their light engines have reached the end of life.

The LD234 is a nicely detailed luminaire with useful mounting accessories, which will overcome many of the installation and aiming issues that are often found with this type of product.

www.lightgraphix.co.uk



Aetherea

Rome, Italy

From 30 November, 2024, to 6 January, 2025, the Botanical Garden of Rome hosted, as part of the Festival Trame di Luce, the interactive installation *Aetherea*, focused on the Fountain of the Tritons (1742) by Giuseppe Poddi, one of the gems of the 18th-century garden of Palazzo Corsini.

This extraordinary site, one of the most important botanical gardens in Europe, offered a unique experience combining history, architecture, and nature, with more than 3,000 plant species, evoking magic and wonder at every step.

Created by Lighting Design Master's students of the Sapienza Univeristy of Rome's Department of Architecture and Design, *Aetherea* presented a dual perceptual register that unfolded around the Fountain of the Tritons. It was envisioned as an inner journey where Earth, represented by trees, symbols of grounding, structure, and stability, met Water, associated with emotions, memory, and the unconscious. Two worlds that seem distant but are truly connected, in a constant dialogue.

From a distance, it appeared as an abstract three-dimensional volume, but as one approached, the sensation arose of entering the structure of a giant tree, or of shrinking, like Alice on her journey to Wonderland.

The suspended elements above abstractly recalled the concentric rings of a tree, but in this "magical" site, where nature and architecture were more intertwined than ever, the Fountain of the Tritons was the geometric matrix, and the concentric rings of the tree took shape.

Inside this volume lived the "space of the dream". Here, the second perceptual level came to life, the more intimate and dreamlike one, interactive, as when the water was touched, a series of "dreamed" visions sprung to life, allowing the two planes of reality – the concrete and the unconscious – to finally meet.

A semi-transparent external "skin," made of polyester threads and illuminated by dynamic lights with "water" effects, was visible from the entrance to the Botanical Garden. This vertical volume recalled the aquatic element of the site, but as visitors approached, they were drawn to the more hidden inner world of the installation. By pulling back the curtain and approaching the water, an interactive and sensory experience unfolded, enhanced by projections and immersive sounds. The upper part of the structure replicated the shape and dimensions of the Fountain of the Tritons, with smaller concentric elements arranged inside, evoking the rings of a giant tree. The varying lights suggested the entrance to the section of a tree, amplifying the feeling of an emotional journey.

Aetherea was structurally composed of a 14-metre-diameter circular truss, covered with a black cloth to minimise its visual impact. Ten lighting fixtures with a gobo effect were placed around the perimeter to illuminate the external skin, while at the centre, two lattice elements supported five video projectors for the interactive projections. The concentric rings were made of forex, with their inner sides lined with mirrored PVC to capture and reflect the indirect light emanating from the water. The outermost element supported a polyester curtain that softly grazes the fountain's edge. The dynamic and interactive effects were controlled by a DMX controller.

www.uniroma1.it

Image: Michele Cirillo / Federico Mauri

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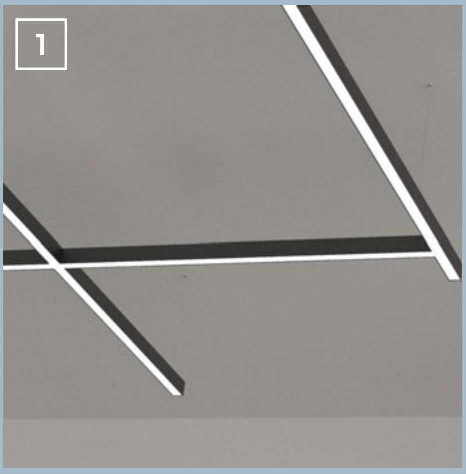
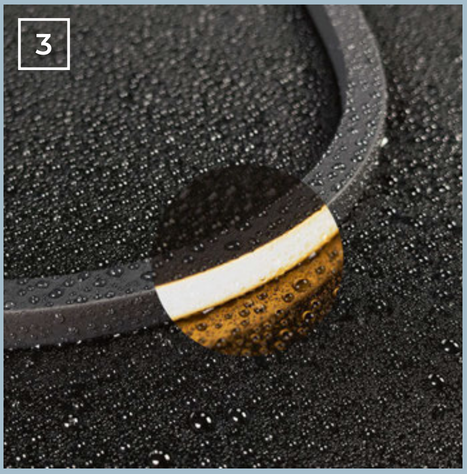
Product Launches





1 **Space 60**
Neko Lighting

Designed for modern workplace environments, the Space 60 offers fluid modularity and precision-engineered glare control to create comfortable, effective illumination. Modular magic (L/T/X connectors) unlocks infinite spatial choreography, while scalable silhouettes shift effortlessly from solo elegance to boundless harmony. Beyond illumination, it architects 'lightscapes', where productivity and artistry converge, transforming workplaces into luminous ecosystems of inspired focus.

www.nekolighting.com

2 **Tesis**
Erco

Tesis from Erco has reached a new level of performance following intensive further development. Whether directional spotlights with interchangeable lenses and zoom light distributions or uplights – its lighting technology convinces with maximum brilliance and efficiency. For particularly close-to-the-wall installation semi-recessed wallwashers can be mounted extremely near to the wall with only 1/6 of the wall height. They feature gentle, uniform light beams that start at the ground and extend to great heights.

www.erco.com

3 **Full Black Flexglo F23**
Clear Lighting

The full black neon flex is hypnotic, it whispers sophistication with every curve. It isn't just a light; it's a statement. This black neon, Flexglo F23 with a matte finish is like an ebony ribbon that carves its way along surfaces, casting a soft, enigmatic glow that hints at mystery while maintaining absolute control. It reduces clashing aesthetics, eliminating harsh glare and unwanted reflections. That's the full black neon flex in action, when it's off, it's invisible. When it's on, it's perfection. Accentuating the ambience in luxury hotels, chic restaurants, and exclusive clubs.

www.clearlighting.com

4 **LINEARdrive DC-Powered LED drivers**
eldoLED

Stunning lighting effects with constant voltage tape lighting – the LINEARdrive DC-powered driver series by eldoLED has been designed to enable infinite colour control with CV LED strips. With single colour, tunable white, dim to warm, or full colour – perfect for architectural or cove lighting. Smooth colour transitions and dimming down to 0.1%. Maximum power ranges from 720-180W. The reliable solution in numerous lighting projects – including Notre-Dame and Versailles castle.

www.eldoled.com

5 **Exterior Projection Pro Compact**
Martin Professional

Featuring a modular design with 11 configurable options and up to four layers of effects, including precise façade framing, the Exterior Projection Pro Compact offers a broad spectrum of creative possibilities while minimising complexity and cost. Its compact footprint and lightweight design facilitate pole mounting and seamless integration, while the built-in zoom system enables precision adjustment of the projection angle from 15-45°, supported by an ultra-efficient optical system that consistently delivers 4,400lm across the entire zoom range.

www.martin.com

6 **R-SL-16 Cube Connector**
Corporate Friends

The R-SL-16 Cube Connector redefines exhibition lighting by enabling multi-axis assembly of the R-SL-16 profile. This breakthrough allows seamless integration of linear and accent lighting, creating three-dimensional illumination structures. With Y, T, and L connectors, designers gain limitless flexibility. Featuring 22°-55° linear optics, dimmable accent lighting, and dual power circuits (12V & 24V), it delivers precision and museum-quality CRI ~97 lighting. Ideal for professional displays, this system transforms lighting design.

www.corporatefriends.de

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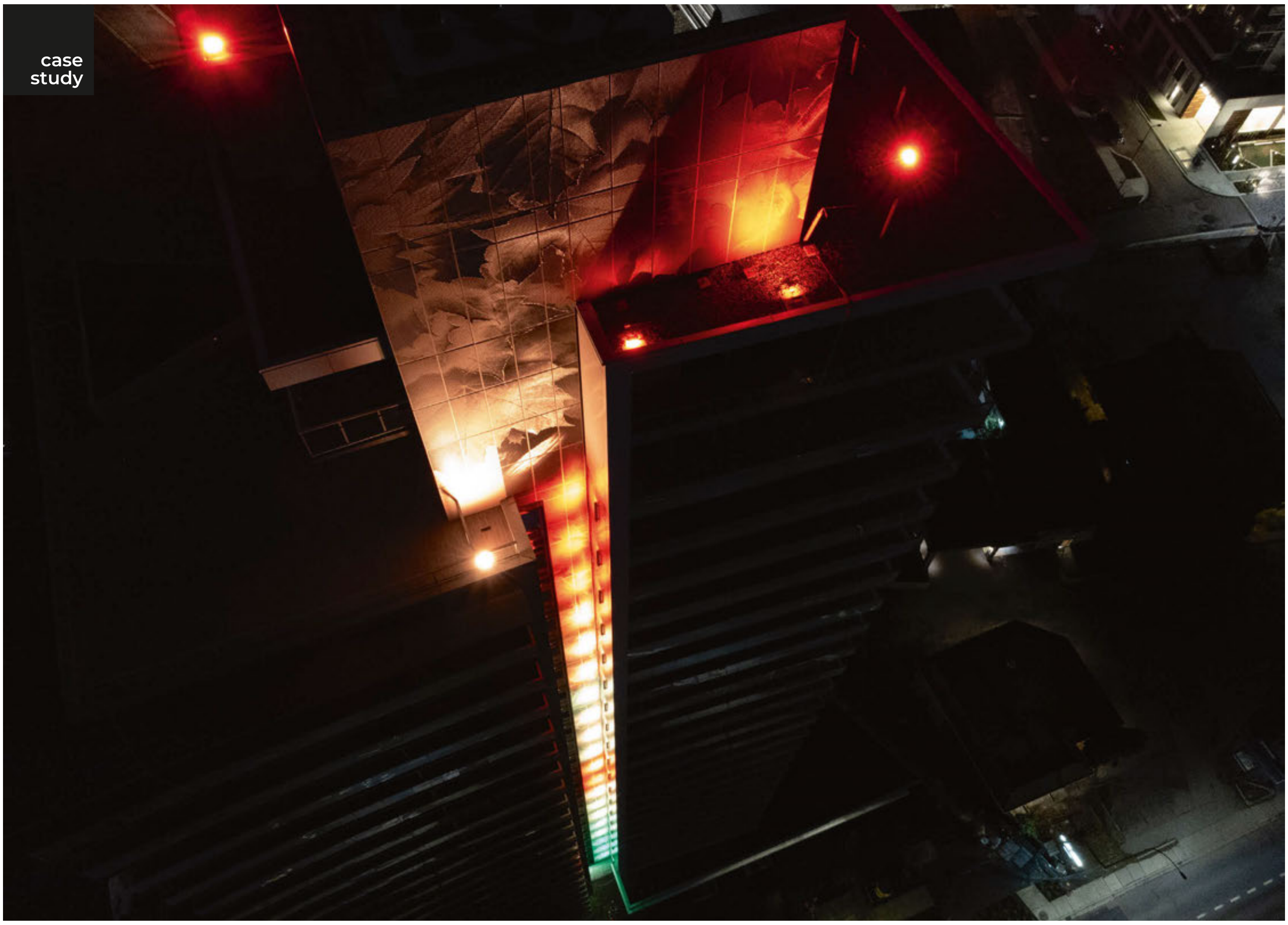

The Sentinel
Vancouver, Canada

A 26-storey development in Vancouver has been given a statement exterior appearance, thanks to a mix of products from **Acclaim Lighting**.

The Sentinel, an elevated residential 26-storey development, is becoming a new marquee statement to the West Vancouver skyline thanks, in part, to the illuminated Ombrae Vinea Canopy. The combined vision of Ombrae Studios and Denna Homes was to mimic nature's seasonal shift by utilising transitional green, red and yellow lights.

Achieving uniform brightness across the vertical surface, while having the colour flow into one another, required a special mix of products from Acclaim Lighting to achieve the desired effect.

The Flood One EO colour paired with the Linear One DMX exterior made for the perfect combo due to their high output colour-changing RGBW options and ability to withstand the elements. In addition, Acclaim Lighting's RDS 6 and ART 500 were specified for programming and bringing the colour gradients to life.

Achieving uniform brightness across the vertical surface, while having the colour flow into one another, required a special mix of products from Acclaim Lighting to achieve the desired effect. The Flood One EO colour paired with the Linear One DMX exterior made for the perfect combo due to their high output colour-changing RGBW options and ability to withstand the elements.

In addition, Acclaim Lighting's RDS 6 and ART 500 were specified for programming and bringing the colour gradients to life.

Creating the dramatic lighting, which scales the side of the building and wraps around the crown of the tower, required meticulous setup and fine-tuning. Mac's II Agencies' highly experienced Lighting Controls Specialist, Brent Nicholson, overcame challenges surrounding programming issues, with assistance from Acclaim Lighting, to ensure the desired wall-washing colour blend was being cast to everyone's desired result.

This artistic outdoor lighting installation adds a natural organic element to the architecture and is a new prominent beacon to the West Vancouver cityscape.

www.acclaimlighting.com

Image: Sake Elzinga & Nienke Maat

Drents Museum
Assen, Netherlands

An audiovisual package from Genelec and **Pharos Architectural Controls** brings to life a new, permanent exhibition inside Assen's Drents Museum.

An impressive new permanent exhibition inside Drents Museum in the Netherlands has been brought to life by Ata Tech, with a comprehensive audiovisual package from Pharos Architectural Controls and Genelec.

The exhibition comprises 15 rooms that create a labyrinth of interactive storytelling, revitalising the northeastern province of Drenthe in the Netherlands. Visitors experience an array of unique interactive adventures, from a mammoth hunt to a farmer's wedding. The exhibit also features the world's oldest-known boat, the 12,000-year-old Pesse canoe, discovered near the museum in the 1950s.

Advanced technologies from Pharos and Genelec were utilised to create the interactive soundscapes and projections that also enable guests to participate in games such as spear throwing and canoeing. A Pharos Designer LPC (Lighting Playback Controller) created the perfect interface to handle the complex lighting and sound requirements for the exhibition, which includes a full universe of DMX-patched lighting fixtures, as well as control of other AV devices.

Pharos Cloud allowed for remote monitoring, management and adjustment of the multiple systems required to create a seamless, immersive visitor experience. The LPC's show-control capabilities were integrated with Genelec loudspeakers to create the single-controller system, making start-up, shutdown and maintenance of the installation simpler and more effective.

The additional flexibility provided by Pharos Cloud enables both Ata Tech and the team at the museum to respond quickly to any programming changes or new requirements that arise, without the need for physical intervention. This not only ensures optimal operation of all systems, but does so in a way that is user-friendly, allowing museum staff to easily manage the various systems through an intuitive interface.

The challenge in the Labyrinthia project was implementing a soundscape throughout the museum, while ensuring the audio synchronised seamlessly with the content in each room. Additionally, it needed to allow museum hosts and tour guides to easily mute the sound in each exhibition space during guided tours. This was achieved using the Genelec system, which enables guides to manage the audio effortlessly via a smartphone or iPad. A monitoring system was also installed, allowing Ata Tech to remotely check the functionality of the audio system. The system can be monitored globally via Pharos Cloud, enhancing maintenance efficiency and reliability.

Tom Aarts from Ata Tech, said: "The feedback from the client and from visitors alike has been fantastic and we are thrilled to see the exhibitions in action; entertaining, engaging and educating guests that visit the museum. The choice of Pharos and its integration with Genelec allows the technologies at the Drents Museum to be combined in a flexible and efficient way, contributing to a dynamic and immersive experience for the visitors."

www.pharoscontrols.com

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www.dpalighting.com

Photography: “Earth and Sky” by Francisco Negroni

Professor Steve Millington
Manchester Metropolitan University

What
Blackpool Illuminations.

Where
Blackpool, UK. Located just over an hour by train from Manchester, the annual Illuminations officially started in 1912, although the resort's electric tramway, which is still in operation, introduced illuminated trams in 1897.

How
Take a tram to Little Bispham and stroll back to town along the North Shore, enjoying the impressive mechanical son et lumières dioramas. Walk the Golden Mile but pause to admire the light show on the Blackpool Tower while standing on Britain's largest public artwork – The Comedy Carpet. Adventurous individuals may continue to Starr Gate and cover the entire six miles of lights.

When
From the end of August to Christmas, consider planning around events such as Ride the Lights (August), the World Fireworks Championship (September), or the Lightpool Festival (October). Be sure to visit the Grundy Art Gallery and the exquisite Tower Ballroom. Since this is the North West coast of England, make sure to dress for all weathers. During Heritage Open Days, you can book a guided tour of the Illuminations workshop.

Why
Since the 1950s, the Illuminations have displayed icons from popular culture, including singers, comedians, celebrities, female impersonators, burlesque performers, giant Tiffany Lamps, and Daleks. They pay tribute to fairy tales, myths, cartoons, and nursery rhymes. They explore themes from the supernatural, horror, and science fiction. Ultimately, the Illuminations act as an extraordinary historical record of both emerging and fading trends, cultural practices, and styles, reflecting the essential characteristics of British popular culture. The resort is a City of Lights that rivals Paris or Chicago in culture, glamour, and style. Blackpool boasts its own version of the Eiffel Tower, so why not?

www.mmu.ac.uk

> "Restraint, straight-laced good taste aesthetics and minimalism are your sworn design enemies. To work, Blackpool Illuminations have to be high kicking, showbiz, jazz hands and more than a little 'nudge nudge, wink wink'. Terms no-one ever teaches you at art school."
>
> **Laurence Llewelyn-Bowen, TV personality and interior designer**

LIGHTPOOL
AT BLACKPOOL
ILLUMINATIONS
THE BLACKPOOL TOWER

Image: Jonny Gios via Unsplash

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Recolight is the leading UK WEEE compliance scheme for lighting, taking on responsibility for its members' WEEE compliance. Offering free integrated Lamp and Luminaire collection and recycling and the biggest UK-wide network of collection points for all WEEE lighting.

Recolight go beyond recycling, by offering circular economy services, facilitating the reuse of lighting equipment, and helping to avoid unnecessary recycling of surplus new lighting.

Working with the lighting industry, Recolight offer support and services to help their Producer Members transition to a Circular Economy.

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Hand model: **Olga**, our *Optical Engineer*